

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

UNITED STATES OF AMERICA

Plaintiff,

v.

MICROSOFT CORPORATION,

Defendant.

Civil Action No. 98-1232 (CKK)

STATE OF NEW YORK, et al.,

Plaintiffs,

v.

MICROSOFT CORPORATION,

Defendant.

Civil Action No. 98-1233 (CKK)

**COMMENTS OF AOL TIME WARNER
ON THE PROPOSED FINAL JUDGMENT**

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**COMMENTS OF AOL TIME WARNER
ON THE PROPOSED FINAL JUDGMENT**

Pursuant to Section 2(b) of the Antitrust Procedures and Penalties Act, 15 U.S.C. § 16, AOL Time Warner respectfully submits the following comments on the Proposed Final Judgment (“PFJ”) in the above-referenced matter.

INTRODUCTION

The Proposed Final Judgment sets forth a decree that is too limited in its objectives and too flawed in its execution to meet the Tunney Act’s “public interest” test. It allows Microsoft to continue to bind and bundle its middleware applications with its Windows Operating System (“OS”) – even though the Court of Appeals found Microsoft’s actions in this regard to be illegal. And its patchwork of constraints on Microsoft’s conduct is so loophole-ridden and exception-laden as to render its provisions ineffective. As a result, the PFJ is inadequate to promote competition and protect consumers, and the Court should refuse to find that its entry would be “in the public interest.” 15 U.S.C. § 16(e).

The PFJ comes before the Court in an unprecedented posture for a Tunney Act proceeding. This proposed settlement was reached – not as the case was being filed, nor as it was being tried, nor even as it was being appealed – but rather, after the Court of Appeals for the District of Columbia Circuit unanimously affirmed a finding of illegal monopoly maintenance by Microsoft. Such circumstances surely require a more rigorous application of the “public interest” standard than when a case is settled before the first interrogatory is even served – the usual situation when a Tunney Act review is conducted. Helpfully, a readily available and judicially administrable measure of the “public interest” is available for use in this special circumstance: the four-part test for “a remedies decree”

established by the D.C. Circuit in this very litigation. *United States v. Microsoft*, 253 F.3d 34, 103 (D.C. Cir. 2001). Applying this standard, we believe that the Court should find the PFJ to be in the “public interest” only if it (1) “unfetter[s] a market from anticompetitive conduct”; (2) “terminate[s] the illegal monopoly”; (3) “den[ies] to the defendant the fruits of its statutory violation”; and (4) “ensure[s] that there remain no practices likely to result in monopolization in the future.” *Id.* (internal quotations omitted). We believe that there are at least three reasons why the Court should conclude that the PFJ does not meet this test.

First, since July 11, 2001 (for the browser) and December 16, 2001 (for other middleware), Microsoft has been implementing many of the PFJ’s remedial provisions. Thus, the Court need not speculate about the impact these provisions would have on the industry if they were put in place; rather, it can seek submissions and review evidence on whether these critical provisions are beginning to work as they are being implemented by Microsoft. We believe that any such inquiry will reveal that the original equipment manufacturers (“OEMs”) are not exercising the flexibility that the PFJ ostensibly provides them, because the loophole-ridden PFJ gives too few rights to the OEMs and does too little to protect the OEMs in the exercise of those rights. As a result, there is little reason to believe that the PFJ will prove effective in restoring competition, terminating Microsoft’s monopoly, or stripping Microsoft of the fruits of its illegal acts.

Second, the PFJ fails to prohibit Microsoft’s signature anticompetitive conduct: the binding of its middleware applications to its monopoly operating system, and its bundling of these products to further entrench its OS monopoly. The factual questions that surround these legal issues are quite complex, but here again, the Court has a powerful

tool to employ: the extensive factual findings entered by the District Court.¹ These factual findings document Microsoft's purposeful commingling of middleware application code with the Windows OS to harm competition, as well as the contractual bundling of those applications with the OS, to force OEMs to distribute Microsoft's middleware, and to raise distribution hurdles for middleware rivals. Given the PFJ's failure to ban practices that the District Court and the Court of Appeals found to be at the center of Microsoft's illegal maintenance of its OS monopoly, the PFJ does not meet the "public interest" standard.

Third, even with regard to those limited objectives that the PFJ does attempt to achieve – *i.e.*, the creation of "OEM flexibility" to promote desktop competition – the proposed decree is so riddled with loopholes, exceptions and carve-outs as to render it ineffective. These deficiencies are highlighted when the PFJ is compared to previous remedial plans considered in this case, including Judge Jackson's interim conduct remedies and the mediation proposal offered by Judge Richard Posner (which Microsoft apparently agreed to even before it had been found liable for antitrust violations).

Finally, we believe the Court will find the remedial proposal of the litigating state attorneys general ("Litigating States' Remedial Proposal" or "LSRP") – and the Court's consideration of that proposal – to be useful in its review of the PFJ. Most immediately, the LSRP provides a benchmark as to what one group of antitrust enforcers believes to be compelled by the "public interest" in order to achieve the case's remedial objectives. Moreover, the LSRP provides a helpful point of comparison for some specific aspects of the PFJ – *i.e.*, a way to illustrate why particular PFJ provisions are ineffective, by comparison.

¹ These factual findings were affirmed on appeal. *See Microsoft*, 253 F.3d at 51-78. In addition, the Court recently held that the factual findings of the District Court "in support of the liability findings" should be considered "undisputed" for the purpose of this proceeding. (*See* Transcript of January 7, 2002, at 31.)

And third, the Court's consideration of the LSRP will adduce testimony and other evidence that should be weighed in determining whether the PFJ should be approved. Taken as a whole, a comparison of the PFJ with the Litigating States' Remedial Proposal shows why the latter, and not the former, faithfully meets the remedial objectives set forth by the D.C. Circuit and serves the "public interest" as expressed in the nation's antitrust laws.

I. THE COURT SHOULD USE THE REMEDIAL OBJECTIVES ESTABLISHED BY THE D.C. CIRCUIT IN THIS CASE AS THE STANDARD FOR ASSESSING WHETHER THE PFJ IS "IN THE PUBLIC INTEREST."

Passed by Congress in 1974, the Antitrust Procedures and Penalties Act, commonly known as the "Tunney Act," provides that a proposed consent decree may be entered in an antitrust case only if the district court determines that such entry is "in the public interest." *See* 15 U.S.C. § 16(e). Given that the Court will receive numerous submissions on this point, we do not provide here a recitation of the Tunney Act's provisions, or an extensive analysis of the standard of review under the Act. Instead, we focus on just one, overriding "procedural" question: How should the Court measure "the public interest" in this unique case? For reasons we will explain below, we believe that the measure of the "public interest" to be applied in reviewing the PFJ can be found in the remedial objectives set forth by the D.C. Circuit in its consideration of this litigation. *See Microsoft*, 253 F.3d at 103.

First, while the Tunney Act itself does not define "public interest," the case law makes clear that the Court must begin its analysis "by defining the public interest" in accordance with the basic purpose of the antitrust laws, which is to " 'preserv[e] free and unfettered competition as the rule of trade.'" *United States v. American Tel. & Tel. Co.*, 552

F. Supp. 131, 149 (D.D.C. 1982) (quoting *Northern Pacific Ry. Co. v. United States*, 356 U.S. 1 (1958)). As a general rule, a court has discretion to reject a proposed consent decree that is ineffective because it fails to address or resolve the core competitive problems identified in the Department of Justice's complaint. *United States v. Microsoft Corp.*, 56 F.3d 1448, 1457-62 (D.C. Cir. 1995). As this Court stated in *United States v. Thomson Corp.*, 949 F. Supp. 907, 913 (D.D.C. 1996), the court has a responsibility "to compare the complaint filed by the government with the proposed consent decree and determine whether the remedies negotiated between the parties and proposed by the Justice Department clearly and effectively address the anticompetitive harms initially identified." A court should "hesitate" in the face of specific objections from directly affected third parties before concluding that a proposed final judgment is in the public interest. *United States v. Microsoft*, 56 F.3d at 1462. And it "should pay 'special attention' to the clarity of the proposed consent decree and to the adequacy of its compliance mechanisms in order to assure that the decree is sufficiently precise and the compliance mechanisms sufficiently effective to enable the court to manage the implementation of the consent decree and resolve any subsequent disputes." *Thomson Corp.*, 949 F. Supp. at 914 (citing *United States v. Microsoft*, 56 F.3d at 1461-62).

In the context of this proceeding, tremendous guidance as to the content of the public interest test can come from the earlier decision of the Court of Appeals in this case. In that decision, the D.C. Circuit wrote:

[A] remedies decree in an antitrust case must seek to "unfetter a market from anticompetitive conduct," to "terminate the illegal monopoly, deny to the defendant the fruits of its statutory violation, and ensure that there remain no practices likely to result in monopolization in the future."

Microsoft, 253 F.3d at 103 (quoting *Ford Motor Co. v. United States*, 405 U.S. 562, 577 (1972) and *United States v. United Shoe Mach. Corp.*, 391 U.S. 244, 250 (1968)). These words, in our view, form the essence of the public interest test to be applied by the Court in this Tunney Act proceeding.

First, on its face, this passage speaks of the object of a “remedies decree in an antitrust case,” without differentiating between a decree that is achieved through negotiation and one achieved through litigation. Thus, the Court of Appeals’ ruling would appear to be directly controlling here, insofar as it states the measure of adequacy for any remedial decree, however achieved. There is no apparent reason why the “remedies decree” negotiated by the Department of Justice with Microsoft should not have to meet the standard of adequacy generally set forth by the Court of Appeals in its decision.² This is particularly true given that the passage merely “defin[es] the public interest in accordance with the antitrust laws.” *Accord American Tel. & Tel. Co.*, 552 F. Supp. at 149.³

² This is not to say that the Court should reject the PFJ if it finds only that it differs in some respects from the remedy that the Court would impose at the end of litigation. For while the public is entitled to a very robust remedy here, especially given the fact that this case has been litigated through trial and affirmed on appeal with judgments against Microsoft, a settlement clearly does not have to match precisely the outcome that would have been achieved in litigation to be deemed acceptable under the Tunney Act’s public interest test.

How wide a “gap” between a hypothetical litigated result and the proposed settlement is permissible in these circumstances is a question that need not be answered here because the PFJ falls so very short of meeting any reasonable understanding of the “public interest,” given its failure to address many of Microsoft’s illegal acts and its loophole-ridden provisions in the areas that it does purport to cover.

³ This approach generally comports with other Tunney Act cases, which conclude that an antitrust remedy, including a consent decree, must “‘effectively pry open to competition a market that has been closed by defendants’ illegal restraints.” *Id.* at 150 (quoting *International Salt Co. v. United States*, 332 U.S. 392, 401 (1947); *see also* 2 P. Areeda & D. Turner, *Antitrust Laws* § 327 (1978)). A decree “must ‘break up or render impotent the monopoly power found to be in violation of the Act,’ that is, it must leave the defendant without the ability to resume the actions which constituted the antitrust violation in the first place.” *American Tel. & Tel.*, 552 F. Supp. at 150 (quoting *United States v. Grinnell Corp.*, 384 U.S. 563, 577 (1966)). “It must also effectively foreclose the possibility that antitrust violations will occur or recur.” *Id.* As the Supreme Court noted in *International Salt Co.*, 332 U.S. at 400:

Second, the four-part test established by the D.C. Circuit here would give the Court a clear and manageable standard on which to evaluate the proposed decree's adequacy.⁴ Use of the D.C. Circuit's formulation thus avoids one of the principal bases of controversy and difficulty in Tunney Act reviews – *i.e.*, the lack of a judicially manageable standard for assessing the public interest and the consequent risk that judges will inappropriately use standardless judgment to review an exercise of prosecutorial discretion.⁵ Thus, unlike in other Tunney Act cases, where a court lacks an appropriate benchmark on which to measure the purported benefits of the settlement (and thus must be careful not to impose its judgment for that of the Justice Department), here, there is a clear benchmark for the Court to use: the standard set by the Court of Appeals with regard to a “remedies decree.”

Moreover, to the extent that insisting that the PFJ meet the standard set by the Court of Appeals would result in a more exacting review than the review imposed in other Tunney Act proceedings, that would be appropriate in this circumstance. For while the overwhelming majority of decrees reviewed under the Tunney Act occur in a pre-trial

[I]t is not necessary that all of the untraveled roads to [anticompetitive conduct] be left open and that only the worn one be closed. The usual ways to the prohibited goals may be blocked against the proven transgressor.

Additionally, “antitrust violations should be remedied ‘with as little injury as possible to the interest of the general public’ and to relevant private interests.” *Id.* (quoting *United States v. American Tobacco Co.*, 221 U.S. 106, 185 (1911)).

⁴ While the Department of Justice urges the Court to adopt a much more lax review, even the government acknowledges that the Court’s “review of the decree is informed not merely by the allegations contained in the Complaint, but also by the extensive factual and legal record resulting from the district and appellate court proceedings.” (See Competitive Impact Statement (“CIS”) at 68 (November 15, 2001).)

⁵ It was precisely the lack of a judicial finding of liability that caused Chief Justice Rehnquist to question the constitutionality of the Tunney Act. See *Maryland v. United States*, 460 U.S. 1001, 1004 (1982) (Rehnquist, J., dissenting). This argument does not apply in the present case where there has been both a judicial finding of liability (at trial and affirmed on appeal), and there is a standard for review established by an appellate court.

context – where the court lacks a judicial finding of illegality against which to measure the efficacy of the proposed settlement – this proposed settlement was reached after an appellate affirmance of liability. Because the public has invested its resources and time, and taken the risk to win a judgment of liability and defend that judgment on appeal, it has a right to expect a more rigorous decree that meets a higher standard of review. Under these circumstances, the Court’s review under the Tunney Act should not be deferential to the Justice Department; instead, the Court should apply the Court of Appeals’ four-part test and determine if the PFJ meets that test.

As explained in more detail below, the PFJ fails to meet the D.C. Circuit’s four-part test, because contrary to the claims of the Department of Justice, it will neither “provide a prompt, certain and effective remedy for consumers,” nor “restore competitive conditions to the market.” (*See* CIS at 2.) Specifically, it does not “unfetter [the] market from anticompetitive conduct,” because it does not even try to stop Microsoft’s illegal binding and bundling practices – or effectively limit Microsoft’s ability to coerce OEM behavior to its liking. It does not “terminate the illegal monopoly” because it does not effectively promote rival middleware, and because its provisions are so laden with loopholes, exceptions and carve-outs. It does not “deny to the defendant the fruits of its statutory violation,” because it allows Microsoft to continue to leverage its OS monopoly to gain market share in other markets.⁶ And it does not “ensure that there remain no practices likely to result in monopolization in the future,” because it leaves Microsoft free to exploit the OS

⁶ Indeed, Microsoft has actually seen its share of the browser market grow since being found liable for illegal monopoly maintenance. For example, Microsoft’s share of the work browser market increased from 69.3 percent in April 2000 (when Judge Jackson issued his finding of liability) to 79.5 percent in November 2001. Over the same period, Microsoft’s share of the home browser market increased from 75.7 percent to 81.8 percent. *See* Browser Trended Reach Report, Jupiter Media Metrix, January 2002.

monopoly to gain dominance in critical new markets. Failing to address the core anticompetitive wrongs that were found at trial and upheld on appeal against Microsoft, and failing to meet the four-part remedial test established by the D.C. Circuit, the PFJ is manifestly contrary to the public interest and should be rejected.

II. AS MICROSOFT STARTS TO IMPLEMENT MOST OF THE DECREE'S PROVISIONS, THE COURT SHOULD CONSIDER HOW – IF AT ALL – OEMS ARE RESPONDING.

As noted above, the question before the Court is whether the PFJ is “in the public interest.” 15 U.S.C. § 16(e). In making that determination, the statute indicates that the Court may want to consider, *inter alia*: (1) “the competitive impact” of the PFJ, (2) whether it results in the “termination of alleged violations,” and (3) “the impact of [the PFJ] upon the public generally and individuals alleging specific injury.” *Id.*

Fortunately, contrary to most other courts conducting Tunney Act reviews, this Court need not struggle with evaluating the “competitive impact” of the PFJ in a factual vacuum because Microsoft has been, according to its own statements, implementing some provisions found in the PFJ since last July, and the bulk of its provisions since December. That means the Court need not base its “public interest” judgment on abstract legal and economic analyses only; instead, the Court’s analysis can (at least in part) be shaped by a consideration of how Microsoft is beginning to implement parts of the PFJ, and how the PFJ’s provisions are starting to work in practice.⁷ We believe that such a practical review will demonstrate that the portions of the PFJ in question show little prospect – if any – that

⁷ If the Court finds that the submissions made to date are inadequate to assess this question, it can, of course, under the Tunney Act, take whatever testimony or evidence is needed to make such a determination. See 15 U.S.C. § 16(f); Section V.B, *infra*.

they will “unfetter the market,” “terminate the monopoly,” or “deny” to Microsoft “the fruits of its violation.”

A. There Is No Indication That Microsoft’s Implementation Of Major Aspects Of The PFJ Is Even Beginning To Promote Competition Or Helping To Loosen Microsoft’s Control Over The Desktop.

In the joint stipulation filed with the Court on November 6, 2001, Microsoft stated that it would “begin complying with the [PFJ] as [if] it was in full force and effect starting on December 16, 2001.” (Stipulation and Revised Proposed Final Judgment at 2 (November 6, 2001).) While provisions with specific timetables were exempted from this pledge – resulting in an excessive delay for some of the PFJ’s competitive protections – many of the PFJ’s remedial provisions were covered by it. Thus, with regard to many provisions of the PFJ, the proposed decree has been “in effect” since mid-December.⁸

Microsoft’s stipulation offers the Court a unique opportunity to learn, not just how the PFJ would serve the public interest once implemented, but instead, whether the PFJ provisions already in effect are showing signs that they are likely to serve the public interest. These provisions have now effectively been in place for 43 days – and by the time of a likely hearing or other proceeding to consider this question (presumably, in March or April), will have been in effect for three to four months.

Microsoft may protest that a three- to four-month period in which parts of the PFJ will have been applied is inadequate to test those remedies. And that is doubtlessly true with regard to some measures of the PFJ’s effectiveness, such as whether Microsoft’s share of the OS market has shrunk from near absolute to anything less. But there are other

⁸ Some examples of PFJ provisions Microsoft has ostensibly been complying with since December 16, 2001, include: Section III.A (anti-retaliation); Section III.B (uniform licensing); Section III.C (OEM licenses); Section III.G (anticompetitive agreements); and Section III.I (licensing of intellectual property).

measures of the PFJ's effectiveness that should be readily discernible even in this relatively short time.

Among the questions we believe that the court could determine, by the time of a hearing in March or April, would be:

- Have the OEMs exercised (or even attempted to exercise) – in any way beyond the prevailing industry practice prior to December 16th – the flexibilities to remove/replace icons, start menu entries, and default settings for Microsoft middleware products, that are purportedly provided in Section III.C.1 of the PFJ? If not, why not?
- Are non-Microsoft middleware products gaining new distribution via the OEMs as a result of the provisions of Sections III.A. and III.C.2 of the PFJ, as implemented? If not, why not?
- Are non-Microsoft middleware products, to a greater extent than before implementation of the PFJ, attaining the benefits of an “automatic launch,” pursuant to the provisions of Section III.C.3 of the PFJ? If not, why not?
- Is any OEM offering a dual-boot computer, as authorized by Sections III.A.2 and III.C.4 of the PFJ? If not, why not?
- Are there new IAP offerings being made at the conclusion of PC boot sequences, pursuant to Section III.C.5 of the PFJ? If not, why not?
- Has any ISV, IHV, IAP, ICP or OEM gained any additional Windows licensing rights that it did not have prior to the implementation of the PFJ, pursuant to Section III.I of the PFJ? If not, why not?
- Has Microsoft terminated any payments to OEMs that were anticompetitively advantaging Microsoft's products, and that are now forbidden, pursuant to Sections III.A and III.B of the PFJ?

Based on our knowledge of industry developments, we believe that the answer to each of these questions is “no,” with perhaps some very rare and isolated exceptions.⁹ Thus, despite

⁹ Although Compaq and RealNetworks reached an agreement in December 2001, whereby Compaq would place Real's player on its personal computers, *see RealNetworks Sets Deal With Compaq*, The Los Angeles Times, December 13, 2001, it is unclear, among other things, what the terms of the agreement are, what impact it will have on competition and consumer choice, and whether the agreement was motivated, in whole or in part, by the purported “flexibility” of the proposed settlement. While the Court should certainly give the Compaq agreement some consideration in its public interest review, the agreement's mere existence is

Microsoft's proclaimed implementation of large portions of the PFJ, there is scant evidence of OEMs even attempting, let alone succeeding, to offer consumers new choices with respect to middleware products. Even in a relatively short time frame of a few months, one would expect to find numerous OEMs reaching agreements to promote or carry multiple non-Microsoft products. But no such evidence exists. No doubt, that is why countless industry observers and analysts have concluded, after examining the PFJ, that "[t]he changes we will see are minute. Microsoft can control its own destiny. It can do whatever it wants."¹⁰

Presumably, it cannot be in "the public interest" to settle a case after years and years of litigation – including a finding of liability for the government at trial, affirmed unanimously on appeal by the Court of Appeals (*See Microsoft*, 253 F.3d at 46) – for a remedial decree that effectuates only "minute" changes in the strategy the defendant was using to illegally maintain its monopoly. And yet, that is precisely what appears to be happening, as the effectiveness – or lack thereof – of parts of the PFJ are starting to be observed in application.

While we certainly agree with the Department of Justice that it will only be "over time" that any remedy could "help lower the applications barrier to entry," (*see* CIS at 29), that objective will never be achieved if the PFJ does not lead OEMs to even begin to "offer rival middleware to consumers and . . . feature that middleware in ways that increase the likelihood that consumers will choose to use it." (*Id.*) That is: the pro-competitive

probative of nothing more than the compelling need for a hearing so the Court can explore how, if at all, the PFJ is already affecting the marketplace.

¹⁰ See Jeff O'Heir, *Analysis: MS & DOJ Reach Agreement*, P.C. Dealer, November 12, 2001 (quoting Roland Pinto); *see also* Randy Barrett, *MS-DOJ Pact Disappoints*, Interactive Week, Nov. 8, 2001 (quoting Roger Frizzell, Compaq Spokesman, "Basically, we don't feel there's a big difference between where we're standing today and where we were last week."); *Id.* (quoting Mike Griffin, "We don't anticipate any changes at all.").

journey of a thousand miles can never be completed if – as it appears to be the case – the PFJ does not create a market in which OEMs feel free to take that all-important first step. To the extent that much of the CIS suggests that the goal of the remedy is to create OEM flexibility for its own sake – *i.e.*, to make sure that OEMs have the right to choose non-Microsoft products, whether or not they exercise that right – it misses the mark. The goal of this litigation is not to protect OEMs’ rights, but rather to protect consumers’ rights to enjoy a free and competitive market. In such a market, OEMs can be important surrogates for consumers, but only if they actually offer competitive choices. Likewise, to the extent that the other goal of the remedial proceeding is to reduce the applications barrier to entry, that objective is only achieved to the extent that the OEMs actually distribute and promote non-Microsoft middleware – it is not advanced by the unexercised presence of theoretical OEM choice.

Thus, the determination of whether the PFJ will be effective in promoting its purported ends – *i.e.*, fostering OEMs in making those choices and creating opportunities for competition – need not be left for some subsequent proceeding or for antitrust scholars in future years. It can be ascertained now from the submissions that the Court is receiving, or, if those submissions are inadequate, it could be resolved by the Court in a proceeding where evidence is taken and testimony is heard. *See* Section V.B, *infra*. The manner in which Microsoft is already implementing portions of the PFJ is among the most probative considerations the Court can weigh in determining how – it at all – the proposed settlement will promote competition in the years to come.

B. The Provisions Of The PFJ Implemented By Microsoft Since July 11th Are Not Showing Signs That They Will Work To Restore Competition In The Browser Market.

In addition to the general applicability of the PFJ's provisions, several of its provisions have been in place – as they relate to the Internet browser – since Microsoft took steps to implement them after the Court of Appeals' decision last June. As with the more general PFJ provisions discussed above, the Court should examine whether these browser-specific remedial provisions – which will have been in place for eight months by mid-March – have been effective to date. Again, we believe that the evidence to date shows that the provisions are showing no sign of effectuating change in the market; thus, the PFJ – which (with regard to browsers) does little more than codify these unilateral Microsoft actions – does not meet the “public interest” standard.

On July 11, 2001, in response to the decision of the Court of Appeals, Microsoft announced a program of “greater OEM flexibility for Windows.” *See* Press Release, Microsoft Corporation, *Microsoft Announces Greater OEM Flexibility For Windows*, July 11, 2001. Specifically, Microsoft announced that it would amend its OEM license agreements to provide that:

PC manufacturers will have the option to remove the Start menu entries and icons that provide end users with access to the Internet Explorer components of the operating system. Microsoft will include Internet Explorer in the Add/Remove programs feature in Windows XP.

PC manufacturers will have the option to remove the Start menu entries and icons that provide end users with access to Internet Explorer from previous versions of Windows, including Windows 98, Windows 2000 and Windows Me

Consumers will be able to use the Add-Remove Programs feature in Windows XP to remove end-user access to the Internet Explorer components of the operating system

Id. These provisions mirror the browser-related provisions found in Sections III.C.1 and III.H.1 of the PFJ. Indeed, they comprise almost the entirety of all browser-related remedial provisions found in the PFJ.

Thus, the question of whether the PFJ fulfills the Department of Justice's promise of an effective remedy for "restor[ing] the competitive threat that middleware products posed prior to Microsoft's unlawful undertakings," can easily be assessed – at least with regard to the browser threat, which was such an extensive part of the Court of Appeals' decision – by seeing how effective these unilateral Microsoft actions, taken in July of 2001, have been to date. And unlike the provisions discussed above, which were put in place only in December, it cannot be argued that these browser-related provisions have not yet been tested in the marketplace; rather, they were in place for the launch of Windows XP, which Bill Gates recently dubbed the "best-selling release of Windows ever, and one that is creating great opportunities for PC manufacturers and our other partners in the industry."¹¹ In the simplest terms, as we note above, these "remedies" will have been in place for eight months by mid-March of 2002.¹²

We believe that the initial evidence shows that these provisions are completely ineffective. We are unaware of a single OEM that has used the "flexibility" provided to it by Microsoft to remove Internet Explorer from the Start menu, or from any of its multiple promotional placements on the PC desktop. Nor are we aware of any OEM that has elected to use any competitor to Internet Explorer as a default browser, or to promote alternative browsers to Internet Explorer in any way.

¹¹ See *GM Plans White-Collar Cuts*, Financial Briefs, The Washington Post, January 9, 2002, at E02.

¹² Given that the length of the PFJ is only 60 months, *see* Section V.A of the PFJ, an assessment of the effectiveness of a provision after eight months would be highly significant.

Moreover, there is no indication – more than six months after Microsoft’s July 11th announcement and four months after the first shipments of Windows XP – that Internet Explorer’s commanding market share in the browser market has fallen in any measurable way. If the provisions of the PFJ are strong enough to “restore” competition to the marketplace, which DOJ claims they are (*see* CIS at 3 (“[t]he requirements and prohibitions [of the PFJ] will . . . restore the competitive threat that middleware products posed prior to Microsoft’s unlawful undertakings”)), one would expect to see that the market shares of Microsoft’s browser competitors have increased during this time frame. There is simply no evidence of that. Not only is there a dearth of evidence suggesting that the PFJ’s provisions are going to restore competition to the level enjoyed by Microsoft’s rivals prior to its illegal conduct, but there is no evidence to suggest they are affecting the market at all.

A remedial provision that has no market impact cannot be said to be in the “public interest,” especially in a case like this where the damage from Microsoft’s illegal campaign to eliminate rival middleware has already been done. In other words, because Microsoft has illegally driven down the market shares of its rival middleware developers, restoring competition to the marketplace requires much more than simply eliminating the illegal practices: only if the *status quo ante* is restored would OEM freedom of choice be meaningful. And yet, the evidence suggests that the PFJ provisions that relate to the browser will have no market impact, given the practical experience with highly similar proposals put in place by Microsoft last July. This is important evidence for the Court to consider when reviewing the PFJ.

III. THE PFJ IS NOT IN THE PUBLIC INTEREST BECAUSE IT DOES NOT EVEN ATTEMPT TO HALT MICROSOFT'S MOST INSIDIOUS PRACTICE: ITS ILLEGAL BINDING AND BUNDLING OF MIDDLEWARE APPLICATIONS WITH THE WINDOWS OS.

In this submission – and doubtlessly in the many others the Court will receive – we identify a number of specific deficiencies in the PFJ. *See* Section IV, *infra* and Attachment B. But one omission stands out above all others: the failure of the PFJ to limit Microsoft's ongoing and insidious efforts to maintain its monopoly – and leverage and entrench that monopoly – by tying its middleware applications to the Windows OS. This conduct – found illegal by the District Court and upheld as illegal by the Court of Appeals (*see Microsoft*, 253 F.3d at 67) – is left unchecked by the PFJ. By contrast, a remedy to address this practice appeared in the interim conduct remedies offered by the District Court,¹³ as well as the remedial proposal designed by Judge Richard Posner ("Posner Proposal").¹⁴ The practice is also addressed extensively in the litigating states' proposed remedy. By failing to remedy one of Microsoft's "signature" anticompetitive acts, the PFJ – even before reaching its many other defects – falls far short of the four-part remedial standard set by the Court of Appeals, and by the same token, fails to meet the public interest test established by the Tunney Act.

¹³ We use the interim conduct remedies as a point of reference – notwithstanding the fact that they were vacated on appeal – because the Department of Justice stated publicly that it would "seek an order that is modeled after the interim conduct-related provisions of the Final Judgment previously ordered in the case." *See* Press Release, Department of Justice, *Justice Department Informs Microsoft of Plans for Further Proceedings in the District Court*, September 6, 2001; *see also*, John Hendren, *New Judge Puts Heat on Feds, Microsoft; Quick Settlement Urged to Aid Ailing Economy*, The Seattle Times, September 29, 2001 ("Government lawyers have said they intended to model their proposed remedy on an interim conduct order by the previous district judge who oversaw the case, Judge Thomas Penfield Jackson.").

¹⁴ A draft of the mediation proposal, Mediator's Draft #18 (April 5, 2000) (referred to herein as the "Posner Proposal"), is available at www.ccianet.org/legal/ms/draft18.php3. At the time, several news reports indicated that Microsoft had agreed to the provisions in the Posner Proposal. *See, e.g.*, Joe Wilcox, *Hard to Gauge Extent, Effectiveness of Microsoft Concessions*, CNET News.com, March 30, 2000 (the "software giant has tentatively agreed to sweeping restrictions on how it does business with its partners").

In explaining why it did not seek to limit Microsoft's tying of middleware applications to Windows in the PFJ, the Justice Department has suggested that there was no basis for such a remedy because of the Court of Appeals' reversal of the District Court's finding of liability under Section 1 of the Sherman Act, and the appellate court's direction that the remedy here should "focus[] on the specific practices that the court had ruled unlawful."¹⁵ This analysis fundamentally misapprehends the implications of the Court of Appeals' ruling: contrary to DOJ's view, the Court of Appeals did not suggest that an anti-tying remedy was inappropriate or unnecessary here; indeed, much of the Court of Appeals' decision is a strong declaration of how Microsoft's various forms of tying violated Section 2 of the Sherman Act. *See, e.g., Microsoft* 253 F.3d at 65-67. A remedy that truly "focused on the specific practices that the court had ruled unlawful" would have to address the tying practices that the Court of Appeals "ruled unlawful"; the PFJ does not.

Because Microsoft's various forms of middleware applications tying are critical tactics that it uses to maintain its illegal monopoly, they must be ended if the remedy is to "terminate the monopoly."¹⁶ (*See Microsoft's Tying Strategies To Maintain Monopoly Power In Its Operating System* ("Mathewson & Winter Report"), attached hereto as Attachment A.) Furthermore, the opportunity to gain market share as a result of such tying is one of the principal fruits of Microsoft's illegality, and should therefore be denied to it.¹⁷ As

¹⁵ See Testimony of Assistant Attorney General Charles James, Senate Judiciary Committee (December 12, 2001); *see also Q&A: Charles James Defends The Deal*, Business Week, Nov. 19, 2001 ("People who suggest that [the decree should have ordered Microsoft to sell a stripped-down version of Windows] are not recognizing that the tying claim was eliminated from the case by the appeals court.").

¹⁶ See *Microsoft*, 253 F.3d at 46; 15 U.S.C. § 16(e) (in a Tunney Act proceeding, the court is authorized to consider whether the proposed settlement results in the "termination of alleged violations"); *see also Grinnell Corp.*, 384 U.S. at 577 (a decree must "break up or render impotent the monopoly power found to be in violation of the Act").

¹⁷ See *Microsoft*, 253 F.3d at 51, 103.

a result, the failure of the PFJ to address Microsoft's tying is a fundamental flaw that alone merits rejection of the proposed decree.

Importantly, we note that the legal and economic arguments presented below are reinforced by the empirical observations set forth in Section II, *supra*. That is, the legal and economic analysis below which suggests that a remedy without a ban on tying will be ineffective in theory, is supported by the fact that such a remedy – imposed in part since July, and more substantially since December – is proving to be ineffective in practice.

A. The Court Of Appeals Explicitly Held That Code Commingling – A Form Of Tying Unaddressed By The PFJ – Violates Section 2 Of The Sherman Act .

In affirming the District Court's findings of fact concerning Microsoft's practice of commingling the code for its own middleware products with the code for the Windows OS, the Court of Appeals made clear that such commingling was an unlawful act in violation of Section 2 of the Sherman Act. *See Microsoft*, 253 F.3d at 65-67. Specifically, the Court of Appeals concluded that Microsoft's "commingling has an anticompetitive effect . . . [and] constitute[s] exclusionary conduct, in violation of § 2." *Microsoft*, 253 F.3d at 66-67 (emphasis added).¹⁸ According to the appeals court, Microsoft's "commingling deters OEMs from pre-installing rival browsers, thereby reducing the rivals' usage share and, hence, developers' interest in rivals' APIs as an alternative to the API set exposed by Microsoft's operating system." *Id.* at 66. Moreover, the Court of Appeals affirmed the

¹⁸ In its Conclusions of Law, the District Court broadly condemned Microsoft's decision to bind "Internet Explorer to Windows with . . . technological shackles." *United States v. Microsoft*, 87 F. Supp. 2d at 30, 39 (D.D.C. 2000) ("Conclusions of Law"). Specifically, the District Court denounced Microsoft's decision to bind Internet Explorer to the Windows OS "by placing code specific to Web browsing in the same files as code that provided operating system functions." *United States v. Microsoft*, 84 F. Supp. 2d at 50, ¶161 (D.D.C. 1999) ("Findings of Fact").

District Court's finding that such commingling was done, deliberately and intentionally, to advance Microsoft's anticompetitive aims. *Id.*

Notwithstanding these clear declarations by the Court of Appeals, this practice is not prohibited by the PFJ. Such a prohibition was omitted despite the finding that it is illegal – and despite the Justice Department's recognition that the first remedial objective in a decree should be to “end the unlawful conduct.” (*See* CIS at 24.) Thus, Microsoft remains free to bind its middleware applications, including the browser, to its Windows OS¹⁹ – making it impossible for an OEM, or a consumer, to remove that application from a PC without doing damage to that PC's operating system.

Microsoft's suggestion that competition is adequately served by allowing OEMs to pre-install rival middleware and to remove end-user access to Microsoft middleware – instead of banning commingling – is incorrect for several reasons. First, as the District Court found and the Court of Appeals affirmed, commingling of code strongly deters – and may even prevent – OEMs and consumers from using middleware products offered by Microsoft's competitors (because the Microsoft product is inextricably intertwined with the OS and is thus both easier to use and harder to remove).²⁰ Why would an OEM include a competing middleware product that will cost money to install and use up valuable space on

¹⁹ The danger of according Microsoft this power is exacerbated – and reinforced – by the PFJ's definition of the Windows Operating System Product (“Definition U”), which states that the software code that comprises the Windows Operating System Product “shall be determined by Microsoft in its sole discretion.” Thus, Microsoft can, over time, render all the protections for middleware meaningless, by binding and commingling code, and redefining the OS to include the bound/commingled applications.

²⁰ *See, e.g.,* Findings of Fact, 84 F. Supp. 2d at 49-50, ¶ 159 (“Microsoft knows that the inability to remove Internet Explorer made OEMs less disposed to pre-install Navigator Pre-installing more than one product in a given category . . . can significantly increase an OEM's support costs, for the redundancy can lead to confusion among novice users. In addition, pre-installing a second product in a given software category can increase an OEM's product testing costs. Finally, many OEMs see pre-installing a second application in a given software category as a questionable use of the scarce and valuable space on a PC's hard drive.”).

the hard drive when Microsoft's product is already there and has been so tightly knit with the OS that it cannot be removed without doing damage to the OS? As the Court of Appeals noted (citing the District Court's holding), Microsoft's commingling has

both prevented OEMs from pre-installing other browsers and deterred consumers from using them. In particular, having the IE software code as an irremovable part of Windows meant that pre-installing a second browser would "increase an OEM's product testing costs," because an OEM must test and train its support staff to answer calls related to every software product preinstalled on the machine; moreover, pre-installing a browser in addition to IE would to many OEMs be "a questionable use of the scarce and valuable space on a PC's hard drive."

Microsoft, 253 F.3d at 64 (citations omitted).

As long as commingling is permitted, OEMs and other third party licensees will have no incentive to take advantage of the limited freedom provided by the PFJ and will continue to use Microsoft's middleware products at the expense of its competitors. As a result, commingling reduces Microsoft's distribution costs for its middleware applications to zero. It also raises the distribution costs of rival middleware application makers – who not only must pay for something that Microsoft gets for free (*i.e.*, distribution via OEMs), but must also pay an added bounty to persuade OEMs to install their applications as the second such application on a PC. This, of course, assumes that such an added payment strategy for such middleware would even be plausible (which is highly doubtful, except in rare cases) and would not be defeated by Microsoft, a rival with roughly \$39 billion in cash available to deter the prospect of being outbid by other middleware developers for PC access.

The other way in which code commingling illegally enhances the position of Microsoft middleware is by encouraging applications programmers to write their programs to Microsoft's products. (Mathewson & Winter Report at ¶¶ 14-16.) Third party developers

decide how to write their applications based upon what APIs they believe will be available on the broadest number of computers and will enable their products to function most smoothly. *See Microsoft*, 253 F.3d at 55. Because the PFJ will allow Microsoft to continue commingling its middleware and OS code, it essentially guarantees that Microsoft's application programming interfaces ("APIs") are universally available in all Windows environments (in other words, on virtually all PCs) – and that software developers who write their applications to Microsoft's APIs can write directly to the OS. This is true regardless of whether or not end-user access to the middleware product is visible. As a result, third party software developers (whose business interests are to develop successful applications, not to challenge Microsoft's monopoly) will almost always write their programs to Microsoft middleware.²¹ Thus, Microsoft's commingling practices only exacerbate the "applications barrier to entry" that already encourages developers to create software that runs on Microsoft's dominant OS and interoperates with Microsoft's middleware products. (*See Mathewson & Winter Report* at ¶ 16.)

Thus, in the end, as both the Court of Appeals and the District Court concluded here, commingling itself deters OEMs from installing rival middleware. *See Microsoft*, 253 F.3d at 66; Findings of Fact, 84 F. Supp. 2d at 49-50, ¶ 159. No doubt this is why every other remedial plan contemplated in this litigation – from the Posner Proposal,²²

²¹ For example, a developer that creates music search software is far more likely to develop a program that runs on Windows Media Player than RealPlayer, knowing that the new program would interoperate more readily with the OS if it runs on Microsoft's program and would have fewer glitches.

²² *See* Posner Proposal § 3(9) (Microsoft is enjoined from "tying or combining any middleware product to or with a Windows operating system unless Microsoft offers a version of that operating system without such middleware product at a reduced price that reasonably reflects the relative costs of the operating system and the excluded middleware.").

to Judge Jackson's interim remedial order,²³ to the proposal set forth by the Litigating States²⁴ – has prominently included a ban on code commingling (or, at the very least, a requirement that Microsoft make available a non-commingled version of Windows). Yet, despite that, despite the Court of Appeals' holding, and despite the District Court's factual findings, the PFJ fails to prohibit or limit this practice in any manner whatsoever.

Microsoft has already demonstrated its willingness and ability to fend off threats from competing middleware products by illegally commingling code with the Windows OS.²⁵ As currently drafted, the PFJ gives the company a green light to continue

²³ See *United States v. Microsoft*, 97 F. Supp. 2d 59, 68 (D.D.C. 2000) ("Microsoft shall not, in any Operating System Product distributed six or more months after the effective date of this Final Judgment, Bind any Middleware Product to a Windows Operating System....").

²⁴ The Litigating States' Remedial Proposal would prevent Microsoft from unlawfully reducing the competitive threat from non-Microsoft middleware products by commingling middleware and operating system code. The Litigating States' Remedial Proposal would prohibit the practice of commingling altogether or, alternatively, require Microsoft to offer, upon written request from OEMs or other third party licensees, its operating system on an unbundled basis:

Microsoft shall not, in any Windows Operating System Product (excluding Windows 98 and Windows 98 SE) it distributes beginning six months after the date of entry of this Final Judgment, Bind any Microsoft Middleware Products to the Windows Operating System unless Microsoft also has available to license, upon the written request of each Covered OEM licensee or Third-Party Licensee that so specifies, and Microsoft supports both directly and indirectly, an otherwise identical version of the Windows Operating System Product that omits any combination of Microsoft Middleware Products as indicated by the licensee.

(See Proposed Text ¶ 1 (hereinafter "States' Proposed Text"), attached as Exhibit A to Litigating States' Remedial Proposal (December 7, 2001).)

²⁵ Note that Microsoft's options for exploiting technological means to advance its tying ends are not limited to code commingling. Code commingling, of course, is an extreme version of such tying, in that it prevents OEMs and consumers from removing applications without threatening the integrity of the OS. Other examples discussed during trial include deliberately harming the interoperability of Netscape's Navigator browser, *see, e.g.*, Findings of Fact, 84 F. Supp. 2d at 31, ¶ 84 (finding that Microsoft executives explicitly offered preferred access to APIs to Netscape as an inducement to them to not expose their own APIs); *id.* at 33, ¶¶ 90-91 (finding that when Netscape refused this offer, Microsoft withheld necessary Windows APIs from Netscape, delaying Netscape's Windows 95 browser launch until after the holiday selling season); *id.* at 50, ¶ 160 ("We will bind the shell to the Internet Explorer, so that running any other browser is a jolting experience."); and working aggressively to degrade the performance and desirability of Sun's Java software, *id.* at 109-110, ¶¶ 404-406 (finding that Microsoft harmed development of Java class libraries and cross-platform Java interfaces).

this anticompetitive and illegal practice. The public interest requires that Microsoft's practice of tying its middleware and operating system, via code commingling, be prohibited.

B. Microsoft Uses A Variety Of Other Tying Practices To Maintain Its Operating System Monopoly; If The Monopoly Is To Be "Terminated," Such Contractual Tying Must Be Prohibited.

The Justice Department's insistence that the remedy in this case should not include a general tying prohibition because the government abandoned its Section 1 tying claim is logically flawed. Contrary to DOJ's assertions, as discussed at length above, the ultimate remedy in this case must "terminate" Microsoft's illegally maintained monopoly – and that can only happen if the remedy addresses those behaviors that anticompetitively maintain the Windows monopoly.

The bundling, or contractual tying, of Microsoft's middleware products to its Windows OS is clearly such an anticompetitive behavior: it is the signature tactic used by Microsoft to maintain its monopoly and fend off competitive challenges, and it has been expressly found to be illegal by the Court of Appeals. *See, e.g., Microsoft*, 253 F.3d at 61 (the restriction in Microsoft's licensing agreements that prevents OEMs from removing or uninstalling IE "protects Microsoft's monopoly from the competition that middleware might otherwise present. Therefore, we conclude that the license restriction at issue is anticompetitive.") (emphasis added); *see also* Mathewson & Winter Report at ¶¶ 13-33. Put another way, various tying practices were found by the Court of Appeals to illegally reinforce Microsoft's OS monopoly and thus must be banned in order to realize the remedial mandate of the Court of Appeals and the public interest objectives of the Tunney Act.

The anticompetitive nature of tying is apparent on its face: it reduces competition and consumer choice, making it less likely for Windows consumers to acquire

and use non-Microsoft middleware products for reasons unrelated to the merits of those products. *See Microsoft*, 253 F.3d at 60 (upholding District Court’s conclusion that contractually restricting OEMs’ ability to remove IE “prevented many OEMs from distributing browsers other than IE”); *see also* Mathewson & Winter Report at ¶ 23. Microsoft only makes Windows available for license to OEMs in a bundle that includes a number of its middleware applications (*e.g.*, Internet Explorer, Windows Media Player, Windows Messenger, MSN). Microsoft also contractually prohibits OEMs from removing its applications from the bundled offering.

As explained in the attached economic report from Professors Frank Mathewson and Ralph Winter, such tying is anticompetitive and should fall under the purview of these remedy proceedings for four principal reasons: (1) it reinforces Microsoft’s monopoly by increasing the applications barrier to entry against OS competitors; (2) it reinforces Microsoft’s monopoly by deterring direct challenges to the OS itself as the platform of choice for software developers; (3) it weakens the greatest current competitor to Windows – prior versions of Windows; and (4) Microsoft’s more recent practice of tying the Windows Media Player to the OS creates a new variant of the applications barrier to entry problem for potential OS rivals: a content-encoding barrier to entry. (*See* Mathewson & Winter Report, *passim*.)

First, tying anticompetitively strengthens Microsoft’s OS monopoly by reinforcing the applications barrier to entry against OS competitors. (*Id.* at ¶¶ 14-16.) The dominance of the Windows standard in a wide range of applications, including a few particularly important applications, hampers entry into the operating system market because an entrant has to offer both a new operating system and a full set of applications, or hope that

applications will quickly develop once the new operating system becomes available. *See Microsoft*, 253 F.3d at 55 (applications barrier to entry stems, in part, from the fact that “most developers prefer to write for operating systems that already have a substantial consumer base”). This is referred to as the applications barrier to entry, and the District Court found that it served to protect Microsoft against an OS challenge from IBM in the 1990s. *Id.* (upholding District Court’s finding that “IBM’s difficulty in attracting a larger number of software developers to write for its platform seriously impeded OS/2’s success”).²⁶

By engaging in tying to gain dominance in key applications markets, Microsoft can turn the already-daunting applications barrier to entry into a virtually insurmountable shield. As the Court of Appeals explained, “Microsoft’s efforts to gain market share in one market (browsers) served to meet the threat to Microsoft’s monopoly in another market (operating systems) by keeping rival browsers from gaining the critical mass of users necessary to attract developer attention away from Windows as the platform for software development.” *Microsoft*, 253 F.3d at 60. If Microsoft controls the key applications, it can unilaterally decide not to make those applications available for even the most-promising rival operating systems. Microsoft’s tying thus anticompetitively advantages its position in the middleware applications market and sustains its OS monopoly as well. (*See Mathewson & Winter Report at ¶ 66.*)²⁷

Consider, for example, Microsoft Office. At one point, companies such as Corel and Lotus provided the most popular versions of these applications. At that time, to

²⁶ *See Findings of Fact*, 84 F. Supp. 2d at 19-22, ¶¶ 36-44.

²⁷ *See Microsoft*, 253 F.3d at 59-60 (citing District Court’s finding that “Microsoft’s imposition of [licensing] provisions (like many of Microsoft’s other actions at issue in this case) serves to reduce usage share of Netscape’s browser and, hence, protect Microsoft’s operating system monopoly”).

compete with Microsoft's Windows, rival operating systems needed to persuade Corel and Lotus to port their applications to those rival systems. Now that Microsoft has successfully leveraged Windows to obtain dominance in the Office suite of applications, however, rival OS providers would have to persuade Microsoft to port Office to rival systems.

If Microsoft can gain dominance with key middleware applications such as Office, MSN Messenger, and Windows Media Player, it can ensure that rival operating systems cannot meet customers' demands for the most popular applications. That is, when Microsoft's browser, Microsoft's media player, and Microsoft's instant messenger are dominant in those applications markets, Microsoft may choose not to write its applications to interoperate with a potential rival OS – making it much more difficult for nascent operating systems to compete with Windows.²⁸ Thus, Microsoft's tying, over time, takes today's very high “applications barrier to entry,” and raises it immeasurably higher. (*See* Mathewson & Winter Report at ¶ 66.)

Second, tying reinforces Microsoft's monopoly by deterring direct challenges to the OS itself as the platform of choice for software developers. (*Id.* at ¶¶ 17-19.) A clear incentive for Microsoft to tie its Internet Explorer browser with Windows was the threat that Netscape – on its own, or combined with Java software – would eliminate Microsoft's network advantages in the operating system by providing middleware that would offer a competing platform for software developers. As the District Court and Court of Appeals found, Netscape and Java were particular threats to Microsoft's dominance in operating systems because they potentially represented a platform/programming environment in which

²⁸ This fear is not theoretical: the District Court found that Microsoft made just such a threat to Apple, with regard to Microsoft Office. *See* Findings of Fact, 84 F. Supp. 2d at 95-97, ¶¶ 345-356.

software applications could be developed without regard to the underlying operating system. *See Microsoft*, 253 F.3d at 74. With middleware, the success of a new operating system no longer depended on the development of new code by every application developer. (*See Mathewson & Winter Report* at ¶ 19.)

If rivals develop valuable, widely distributed middleware, software vendors could very well begin to write most of their applications directly to that middleware, and the applications barrier to entry would disappear. By using anticompetitive tying to dominate each promising field of middleware, Microsoft ensures that software developers face a unified field of proprietary Microsoft OS and middleware interfaces. (*Id.*) Thus, Microsoft's tying practices serve, in this way too, to reinforce and entrench its illegal OS monopoly.

Third, tying weakens the greatest current competitor to Windows – prior versions of Windows. (*Id.* at ¶¶ 27-30.)²⁹ Existing versions of Windows provide competitive constraints on Microsoft for a simple reason: if new versions of Windows are insufficiently innovative or too expensive, consumers will choose to retain their older versions of the

²⁹ The District Court's Findings of Fact, 84 F. Supp. 2d at 25, ¶ 57, maintain that the Windows leasing agreement prohibits the user from transferring the OS to another machine so that "there is no legal secondary market in Microsoft operating systems." The Findings of Fact then note at ¶ 58 that there is a thriving illegal market. To limit this, Microsoft charges a higher price for Windows to OEMs that do not limit the number of PCs they sell without the OS pre-installed. One might argue that the durable-goods monopoly problem is eliminated by Microsoft's refusal to allow OEMs to install (without penalty) old versions of Windows. As explained in the attached Mathewson & Winter Report, this is incorrect for two reasons: "(i) increases in the price of the new version of Windows will reduce overall demand for new PCs, as users invoke the option to keep existing PCs with the old version, and (ii) there is a retail market for new versions of Windows software for installation on existing PCs. Both (i) and (ii) provide channels through which the existing stock of Windows software provides some competition for a new version of Windows (*i.e.*, it increases the elasticity of demand for the new version). If the price of a new version is increased, the demand for the new version is reduced because fewer consumers will purchase new PCs as the price increase for Windows raises the price of the overall package of the PC and the (mandated by Microsoft) new version of Windows, and because some consumers who would have purchased Windows to install on their old PCs will now refuse to do so." (*See Mathewson & Winter Report* at 12 n.10.)

product. Through tying, however, Microsoft weakens this source of competition in two ways. First, new versions of Windows are marketed as much for new applications as for new OS features. Windows XP, for example, is being marketed in part for its inclusion of new applications, such as Windows Media Player 8.0 – not just based on innovations and improvements to the OS itself. Second, middleware applications such as Internet Explorer, Windows Media Player (with the attendant Microsoft Digital Rights Management), and MSN allow Microsoft to track consumer usage. Microsoft’s binding of these products to Windows thus creates a total product that lends itself to usage and leasing fees. By gradually reducing the price of Windows and increasing the usage fees on its tied applications, Microsoft can shift to a usage or leasing revenue model, rather than a revenue model based on sales. This eliminates the competitive threat from previous versions of Windows³⁰ (in addition to providing Microsoft with the fruits of its illegal behavior, as discussed in Section III.C, below). (*See id.* at ¶ 28.)

Fourth, in addition to these three general ways in which Microsoft’s contractual tying reinforces the OS monopoly, Microsoft’s more recent tying of its media player to the OS creates yet another special and highly significant reinforcement of the Windows monopoly. (*See Mathewson & Winter Report* at ¶ 36.) This problem results from the close connection between the media player and Microsoft’s proprietary media encoding format, Windows Media Audio (“WMA”). Because Microsoft does not license the WMA format to some rival media players – including, most notably, the only other media player

³⁰ See Jeremy Bulow, “Durable-Goods Monopolists,” *Journal of Political Economy* 90(2): 314-332 (explaining how leasing, rather than selling, solves the monopolists’ “problem” of competition from previously existing stocks of goods); *id.* at 330 (a durable-goods monopolist may be able to achieve the leasing result through extending its monopoly to service contracts).

with substantial market presence, Real Player – Microsoft’s media player is the only major player that can play content encoded in Microsoft’s format. As Microsoft’s format becomes more and more widespread – it is currently growing in use at a rate ten times that of its rivals – more and more content will become viewable and playable only via Microsoft’s media player, which is only distributed via Microsoft’s OS.

In such a market, then, a rival OS would have to overcome not only today’s applications barrier to entry to compete with Windows – that is to say, it would have to persuade application writers to write their applications to interoperate with their OS – it would also have to overcome a new, even more daunting “content encoding barrier to entry” – *i.e.*, it would have to persuade owners of thousands (or perhaps even millions) of pieces of multi-media content to re-encode their content in formats that the media player used by the rival OS could read. (*Id.* at ¶¶ 37-38.) This barrier to entry applies not only to rival PC operating systems, but also to evolving operating systems for handheld and mobile communications devices, since consumers will want to access the best streaming content using those devices. Thus, the currently daunting applications barrier to entry is raised many times higher by virtue of the tying of the Windows Media Player (and its related proprietary formats) to the Windows OS.³¹

All four of these anticompetitive effects are mutually reinforcing, because of the network effects operating between the applications sector and the operating system market. (*Id.* at ¶¶ 31-33.) Achieving dominance in applications (through tying) strengthens

³¹ This same theory applies to Microsoft’s identity-authentication application, known as “Passport.” If Microsoft can leverage its OS monopoly to make Passport ubiquitous, it can persuade e-commerce sites to adopt Passport as the sole identity-authentication standard. If that were to happen, a nascent OS competitor would not only have to develop its own identity-authentication application; it would also have to persuade thousands of e-commerce sites to adopt that application for use on their web sites. Thus, Microsoft’s tying of Passport to the Windows OS could potentially create yet another barrier to entry in the OS market.

the dominance of the OS, because buyers in the OS market are more assured of available applications. The greater dominance in the OS market in turn feeds back into greater dominance in applications, since the tying strategies take the form of imposing an artificial advantage relative to applications of the dominant OS supplier. The greater Microsoft's share across all middleware applications markets, the greater the applications barrier to entry.

Thus, a remedy that does not forbid Microsoft's anticompetitive tying leaves in place one of Microsoft's most powerful tools to maintain its OS dominance – and as a result, does not “unfetter” the market or “terminate” the illegal monopoly. For this reason, the PFJ's failure to include a ban on bundling is not in the public interest.

C. By Allowing Microsoft To Continue To Tie Its Middleware Applications To Windows, Microsoft Retains One Of The Most Valuable “Fruits” Of Its Illegal Acts.

The Court of Appeals made clear that one necessary element of any remedy in this case was to “deny to [Microsoft] the fruits of its violation.” *See Microsoft*, 253 F.3d at 103 (quoting *United Shoe Mach. Corp.*, 391 U.S. at 250). This is in accord with the prevailing doctrine in this area. *See Grinnell Corp.*, 384 U.S. at 577; 2 P. Areeda & H. Hovenkamp, *Antitrust Laws* ¶ 325(c) (2d ed. 2000).

The Court of Appeals found that Microsoft illegally maintained its OS monopoly by engaging in anticompetitive practices. *See Microsoft*, 253 F.3d at 51, 66. Here, because of the nature of its monopoly, one of the most lucrative fruits of Microsoft's illegal behavior is the ability to bundle its other software products with the OS and reap gains in those markets as well. In this way, the PFJ's failure to ban such tying clearly renders it deficient, because without such a prohibition it will fail to prevent future violations of Section 2, as discussed above – and also fail to prevent Microsoft from reaping the benefits

of the OS monopoly that it illegally maintained. Without such a prohibition, Microsoft will be able to continue profiting from its anticompetitive behavior and will have evaded any real punishment for breaking the law.

For these reasons, as with the ban on code commingling discussed above, every other remedial proposal considered in this litigation included a ban on Microsoft's contractual tying via bundling. A formulation of such a ban was found in Judge Jackson's interim conduct remedies, which – in addition to the ban on binding middleware products to the OS – would also have prohibited Microsoft from “conditioning the granting of a Windows Operating System Product license . . . on an OEM or other licensee agreeing to license, promote, or distribute any other Microsoft software product that Microsoft distributes separately from the Windows Operating System Product in the retail channel or through Internet access providers, Internet content providers, ISVs or OEMs.” *United States v. Microsoft*, 97 F. Supp. 2d 59, 68 (D.D.C. 2000). Judge Posner's proposal would have prohibited tying any middleware product with the OS unless Microsoft offered a version of the OS without the middleware application, and did so at a reduced price. *See* Posner Proposal § 3(9). The litigating states also have proposed a very similar remedial approach. (*See* LSRP at 4-6.) Thus, it is only the PFJ, among the various proposals, that has failed to take this essential step to terminate Microsoft's OS monopoly, and deny Microsoft the fruit of its illegal acts. A remedy without such a provision cannot be in the public interest.³²

³² We have argued elsewhere that there could be alternatives to a ban on contractual tying that might, over time, also prove effective. For example, if a remedial plan included a strong provision to permit licensing of Windows, not just to OEMs, but to third parties as well, and such a regime became effective – so that there was active and effective retail competition for bundled OS/applications offerings – then the necessity for banning Microsoft's contractual tying would be somewhat lessened. In such an instance, Microsoft's potential for abusive tying could be disciplined by competition from competing bundles. However, absent such

IV. THE PROPOSED FINAL JUDGMENT FURTHER FAILS THE PUBLIC INTEREST TEST, BECAUSE IT DOES NOT ACHIEVE EVEN THE LIMITED OBJECTIVES THAT IT HOLDS OUT AS ITS AIMS.

As demonstrated above, the PFJ fails to address Microsoft's anticompetitive tying of middleware applications to the Windows OS, and consequently fails to fulfill the remedial mandate of the Court of Appeals. Yet, even for those anticompetitive acts that the PFJ does attempt to address, it does not provide an adequate remedy for Microsoft's illegal conduct. Indeed, the PFJ is so replete with carefully crafted carve-outs and exceptions that many of its provisions, though well intentioned, are rendered meaningless. The result is that the PFJ will do little, if anything, either to terminate Microsoft's monopoly or constrain its ability to fend off middleware threats in the future. And, as we argue above, the preliminary experience with these provisions – since the onset of their implementation by Microsoft – provides little reason to believe that the PFJ will be effective in practice. *See* Section II, *supra*.

While any conduct remedy will, of course, have limitations and the potential for evasion, none of the major defects in the PFJ are inherent in the nature of this sort of remedy. The Litigating States' Remedial Proposal provides a useful contrast on this point. Unlike the PFJ, the LSRP does not leave certain of Microsoft's anticompetitive acts unaddressed or leave Microsoft with the ability to perpetuate its operating system monopoly by illegally eliminating competitive threats from middleware developers. The Litigating States' Remedial Proposal prevents Microsoft from continuing its anticompetitive practices, is designed to restore the competitive balance in the marketplace, and seeks to ensure that

competition – which the PFJ does not create – a ban on contractual tying is absolutely essential to achieve the remedial objectives of this case – and thus, the PFJ's failure to include such a provision is fatal.

competitive threats may emerge in the future unhindered by Microsoft's anticompetitive conduct. As such, it fully comports with the Court of Appeals' decision and provides this Court with a clear roadmap of what the public interest requires in this case.

To avoid undue length or repetition, we do not here provide a comprehensive list of all the numerous inconsistencies, loopholes, and shortcomings of the PFJ; we have included, in Attachment B, a more complete listing for the Court's benefit. (*See A Detailed Critique of the Proposed Final Judgment in U.S. v. Microsoft*, Attachment B.) In this Section, instead, we focus on six critical deficiencies in remedies that (unlike tying) are purportedly addressed in the PFJ: (1) the PFJ's failure to prevent Microsoft's discriminatory licensing practices; (2) its limited and slow-moving API disclosure provisions; (3) its inadequate protections for OEMs from retaliation; (4) its failure to promote distribution of Java; (5) its "gerrymandered" definition of middleware; and (6) its complete lack of an effective enforcement mechanism. Where helpful, we contrast the relevant provision in the litigating states' proposal for comparison's sake. By comparing the two proposals on a few central issues, it should be clear why the LSRP, and not the PFJ, addresses Microsoft illegal conduct in manner that both comports with the Court of Appeals' decision and serves the "public interest" under prevailing antitrust law.

A. The PFJ Allows Microsoft To Continue Engaging In Discriminatory And Restrictive Licensing Agreements To Curtail The Use Of Rival Middleware Products.

One of the ways in which the District Court found, and the Court of Appeals upheld, that Microsoft illegally protects its operating system monopoly from rival middleware is through discriminatory and restrictive licensing provisions. Specifically, the Court of Appeals found that Microsoft uses its licenses not only to reward OEMs that utilize

and promote its products (and to discriminate against those OEMs that wish to promote non-Microsoft products), but also to restrict the manner in which OEMs can distribute rivals' products. *See Microsoft*, 253 F.3d at 61-67.

Despite these findings, the PFJ permits Microsoft to continue to employ discriminatory and restrictive licensing agreements to curtail the use of its competitors' products. As currently structured, the PFJ allows Microsoft to continue its use of discriminatory and restrictive licensing provisions to fend off nascent threats from middleware competitors in several ways. First, the PFJ explicitly allows Microsoft to provide market development allowances to favored OEMs; it likewise allows Microsoft to enter into "joint ventures" with OEMs, that, in practice, are little more than shells for arrangements by Microsoft to shower financial rewards on OEMs that are willing to refuse to deal with Microsoft's competitors. Given the intense competition and low margins in the OEM industry, these rewards would create a decisive competitive disadvantage for "disfavored" OEMs, forcing them to accede to Microsoft's restrictive terms.

The PFJ's mechanisms for enabling these anticompetitive tactics are surprisingly explicit. Under Section III.B.3 of the PFJ, Microsoft is allowed to pay OEMs "market development allowances" to promote Windows products. Thus, OEMs that promote Microsoft products apparently can receive *de facto* cash rebates on their Windows shipments, while OEMs that deal with Microsoft's rivals will pay full list price. This preferential behavior in the browser market was found illegal by both the District Court and the Court of Appeals. *See Microsoft*, 253 F.3d at 60-61. Microsoft should be allowed to engage in

legitimate pricing decisions, but those decisions should be limited to volume-based discounts published in its price lists.³³

Second, under Section III.G.2 of the PFJ, Microsoft may use “joint ventures” to escape any restrictions the proposed settlement would place on its licensing practices. For example, Microsoft may join an OEM in a joint venture for any “new product, technology or service” or improvement to any existing “product, technology or service,” provided that the OEM contributes significant developer “or other resources.” (*See* PFJ at Section III.G.2.) In such an arrangement, Microsoft can seek, and obtain, a pledge that its partner be “prohibit[ed] ... from competing with the object of the joint venture ... for a reasonable period of time.” (*Id.* at III.G.) Thus, Microsoft could enter into a “joint development” project for the “new product” of “Windows X for Preferred OEM Y.” The OEM’s contribution could be entirely in marketing and distribution. Yet, under the language of the PFJ, it appears that Microsoft would have the ability to contractually prohibit OEMs in such joint ventures from offering products or services that compete with Microsoft. Given Microsoft’s history of abusive and coercive behavior toward OEMs, it should not be allowed to enter into joint ventures with OEMs that result in exclusive agreements. Otherwise, in no time at all, Microsoft will use the opportunity to squelch competition.

Third, the PFJ purports to provide OEMs with the freedom and flexibility to configure the computers they sell in a way that does not discriminate against non-Microsoft

³³ Less explicitly, but perhaps even more nefariously, the same provision that authorizes continuation of “market development allowances” (*i.e.*, III.B.3) says that Microsoft may also maintain “programs ... in connection with Windows [OS] products.” This appears to be a carefully veiled reference to Microsoft’s use of “Marketing Development Funds” – highly discretionary, highly targeted payments to OEMs that can be yet another means of effectively rendering the list price of Windows economically irrelevant. While the PFJ ostensibly says that these “programs” must have “objective criteria,” “neutral” criteria can be easily formulated that have the effect of rewarding favored players and punishing less cooperative OEMs, given the small number of major OEMs in existence.

products. Under Section III.C, the PFJ ostensibly prohibits Microsoft from entering into an agreement that would – among other things – restrict an OEM’s ability to remove or install desktop icons, folders and Start menus, and modify the initial boot sequence for non-Microsoft middleware. However, the PFJ contains carve-out provisions that may render these prohibitions effectively meaningless. Under the express terms of Section III.C.1 of the PFJ, Microsoft may retain control of desktop configuration by being able to prohibit OEMs from installing or displaying icons or other shortcuts to a non-Microsoft product or service, if Microsoft does not provide the same product or service. Thus, for example, if Microsoft does not include a media player shortcut inside its “My Music” folder, it can forbid an OEM from doing the same. This turns innovation – and the premise that OEMs be permitted to differentiate their products – on its head: under the PFJ, rivals can “compete” with Microsoft, but they are never allowed a chance to bring a product to market first, to offer a functionality before Microsoft does, or to benefit from their innovations before Microsoft determines that it is ready to meet (and if history is a guide, extinguish) these competitive challenges.

Additionally, under the PFJ, Microsoft can control the extent to which non-Microsoft middleware is promoted on the desktop by virtue of a limitation that OEMs may promote such software at the conclusion of a boot sequence or an Internet hook-up only if they display no user interface or a user interface that is “of similar size and shape to the user interface provided by the corresponding Microsoft middleware.” (*See* PFJ at III.C.3.) And OEMs are allowed to offer Internet Access Provider (“IAP”) promotions at the end of a boot sequence, but only for their own IAP offerings (whatever that ambiguous limitation means).

(*See id.* at III.C.5.) Thus, under the PFJ, Microsoft maintains the ability to set the parameters for competition and user interface.

In order to promote competition from rival middleware, Microsoft must be prohibited from entering into restrictive and discriminatory contractual agreements with its licensees. Although remedial proposals could have been crafted to address these anticompetitive practices, the PFJ falls short of this mark.

By contrast, the Litigating States' Remedial Proposal would bring Microsoft's unlawful behavior to an end and thus provide competing middleware the opportunity to receive effective distribution through the important OEM channel. Under the LSRP, Microsoft would be required, at a minimum, to offer uniform and non-discriminatory license terms to OEMs and other third-party licensees. The LSRP would also require Microsoft to permit its licensees to customize Windows to include whatever Microsoft middleware or competing middleware the licensee wishes to sell to consumers. (*See* LSRP at 7-9.)

In addition, the LSRP specifically prohibits Microsoft from employing market development allowances, including special discounts based on joint development projects.³⁴ It also gives OEMs and other third-party licensees the flexibility to feature non-Microsoft products in ways that increase the likelihood that consumers will use them, without providing broad exceptions that enable Microsoft to avoid its obligations.³⁵ Thus, it is the LSRP – and not the PFJ – that meets the Tunney Act's "public interest" standard.

³⁴ (*See* States' Proposed Text ¶ 2(a) ("Microsoft shall license, to Covered OEMs and Third-Party Licensees, Windows Operating System Products . . . pursuant to uniform license agreements with uniform terms and conditions. Microsoft shall not employ Market Development Allowances or other discounts, including special discounts based on involvement or any joint development process. . . ."))

³⁵ (*See* States' Proposed Text ¶ 2(c) ("Microsoft shall not restrict (by contract or otherwise, including but not limited to granting or withholding consideration) an OEM or Third-Party Licensee from modifying the BIOS, boot sequence, startup folder, smart folder (e.g., MyMusic or MyPhotos), links, internet connection

B. The PFJ Requires Microsoft To Disclose APIs Only In Certain, Narrow Circumstances.

Another key element of the government's case against Microsoft was the company's withholding of the operating system's API information from rivals, so as to illegally degrade the performance of rival applications. In any market where Microsoft is allowed to withhold APIs, rival software will perform imperfectly in the Windows environment, and Microsoft will illegally gain dominance. Accordingly, in order to promote competition from rival middleware developers, it is essential that Microsoft be required to provide timely access to all technical information required to permit non-Microsoft middleware to achieve interoperability with Microsoft software.

Section III.D of the PFJ imposes an obligation on Microsoft to disclose to Independent Software Vendors ("ISVs"), and others, the APIs that Microsoft middleware uses to interoperate with any Windows OS product. However, the PFJ's requirement for API disclosure is drawn much too narrowly to allow non-Microsoft middleware to compete fairly with Microsoft middleware. Here again, a comparison with the proposal of the litigating states is instructive.

First, the PFJ's disclosure requirement fails to prevent "future monopolization," because it fails to apply to critical technologies that Microsoft is likely to use to maintain the power of its OS monopoly in the future. Because nascent threats to Microsoft's monopoly operating system currently exist beyond the middleware platform resident on the same computer, any effective API disclosure requirement must apply to all technologies that could provide a competitive platform challenge to Windows, including

wizard, desktop, preferences, favorites, start page, first screen, or other aspect of any Middleware in that product.".)

network servers, web servers, and hand-held devices. The PFJ does not; by contrast, the Litigating States' Remedial Proposal expressly provides that Microsoft must disclose all APIs, technical information, and other communications interfaces so that Microsoft software installed on one computer (including personal computers, servers, handheld computing devices and set-top boxes) can interoperate with Microsoft platform software installed on another computer. (*See* LSRP at 11.)

Second, the PFJ creates an apparent exception for Microsoft's API disclosure requirement in the emerging areas of identity authentication and digital rights management ("DRM") – critical applications that are also important to the prospects of Microsoft's "future monopolization." Section III.J.1.(a) appears to exempt Microsoft from disclosing any API or interface protocol "the disclosure of which would compromise the security of ... digital rights management... or authentication systems, including without limitation, keys, authorization tokens or enforcement criteria." This exception is written much more broadly than any of the limits on Microsoft behavior, and could easily be used to protect Microsoft's APIs relating to DRM and identity authentication applications. The implication of this is that any rival DRM or authentication software will not function as well as Microsoft's DRM, Passport, and .Net My Services (formerly known as Hailstorm). Thus, under the PFJ, Microsoft may be able to degrade the performance of any rivals to any of these services.

These markets, however, are just as important to the next stage of the industry's evolution as browsers were to the last stage. DRM solutions, for example, allow content vendors to sell audio and video content over the Internet on a "pay for play" basis. Since the most prevalent use of media players in the years ahead will be in playing content that is protected in this fashion, if non-Microsoft media players cannot interoperate with

Windows' DRM solution, those media players will be virtually useless except for "freeware" content.³⁶ Thus, if DRM is exempt from API disclosures under the PFJ, Microsoft can destroy the competitive market for one of the most vital forms of middleware – media players.

The authentication exemption is potentially even more far-reaching. Most experts agree that the future of computing lies with server-based applications that consumers will access from a variety of devices. Indeed, Microsoft's ".Net" and ".Net My Services" (formerly known as Hailstorm) are evidence that Microsoft certainly holds this belief. These services, when linked with Microsoft's Passport, may allow Microsoft to participate in a substantial share of consumer e-commerce transactions over the Internet, irrespective of which device is used to access the Internet (cell phones, handheld computers, *etc.*). If Microsoft prevents competition with its Passport standard, it may be able to realize its stated goal of charging a fee for every single e-commerce transaction on the Internet.³⁷

Under the guise of security, Microsoft has obtained a loophole in the PFJ that undercuts a critical disclosure requirement. Microsoft's legitimate security concerns – which, of course, are shared by all of its major business rivals – do not require this loophole. Section III.J.2 of the PFJ excludes from disclosure rights any company with a history of software counterfeiting or piracy or willful violation of intellectual property rights, or any company that does not demonstrate an authentic and viable business that requires the APIs. This means that Microsoft only has to disclose to *bona fide* software rivals whose interests in

³⁶ See Brad King, *Microsoft Poised for Music Domination*, Wired, June 14, 2001.

³⁷ As Nathan Myrthvold, Microsoft's former chief technology officer, put it, Microsoft's strategy is to "get a 'vig,' or 'vigorish,' on every transaction over the Internet that uses Microsoft's technology." David Bank, *Microsoft Moves To Rule On-Line Sales*, The Wall Street Journal, June 5, 1997, at B1. The term refers to a gambling house's "cut" on all bets placed in the establishment.

security and stability are as great as Microsoft's. As added protection, Section III.J.1.(b) of the PFJ allows Microsoft to refrain from any disclosure simply by persuading an impartial government body, on a case-by-case basis, that a specific disclosure would put system security at risk. Together, these provisions provide Microsoft with all the room it needs to take legitimate security precautions.

Once again, the litigating states' proposal provides a useful contrast. It contains no disclosure "carve out" to exempt DRM and identity-authentication from the general disclosure obligation imposed on Microsoft. (See LSRP at 11.) Instead, it creates a regime of timely, complete, and comprehensive API disclosure that will allow competitors an opportunity to challenge Microsoft's efforts to entrench its OS monopoly in a market where distributed computing is the dominant model – an opportunity that was sadly missed as the browser became critical to Internet-related applications, due to Microsoft's anticompetitive refusals to share technical information. Thus, once again, it is the LSRP, not the PFJ, that would meet the Court of Appeals' objectives and the public interest standard.

C. The PFJ Does Not Ban Many Forms Of Retaliation By Microsoft Against OEMs.

The District Court found, and the Court of Appeals upheld, that in order to create a competitive market structure in which non-Microsoft middleware products are able to compete effectively with Microsoft products, licensees, such as OEMs, must have the ability to distribute and promote non-Microsoft products without fear of coercion or interference from Microsoft. Recognizing the central role that OEMs play in the distribution and ultimate usage of non-Microsoft middleware products, the PFJ includes an anti-retaliation provision which is intended to protect those entities that support or promote non-

Microsoft products. According to the Department of Justice, this anti-retaliation provision “broadly prohibits any sort of Microsoft retaliation against an OEM based on the OEM’s contemplated or actual decision to support non-Microsoft software.” (*See* CIS at 25.)

Unfortunately, the PFJ does not provide the broad protection from Microsoft’s retaliation that the government claims it does. Indeed, the PFJ’s anti-retaliation provision is so narrow that it will do little, if anything, to protect OEMs that wish to distribute or promote non-Microsoft products. The PFJ’s anti-retaliation provision is deficient in numerous respects. First, it appears to create only a narrow range of procompetitive activities that OEMs can engage in without being subject to Microsoft retaliation. For example, the PFJ prohibits retaliation for OEMs that promote rival middleware, but does not appear to prohibit retaliation against OEMs that promote any other type of rival software (which, under the PFJ’s language, probably includes rivals to Passport, MS Money, Windows Movie Maker, and MSN Messenger, just to name a few). Even if this glitch were unintentional, the ambiguity might still be sufficient to allow Microsoft to coerce OEMs into avoiding Microsoft rivals.

Second, even within the scope of protected OEM activities, the PFJ appears to bar only certain types of Microsoft retaliation. The PFJ prohibits Microsoft from withholding “newly introduced forms of non-monetary Consideration” from OEMs, but is less clear about whether Microsoft may use already-existing forms of consideration to retaliate against OEMs. (*See* PFJ at III.A.) More importantly, while the PFJ prohibits Microsoft retaliation via an alteration of commercial agreements, it does not appear to

prohibit any other form of Microsoft retaliation (*e.g.*, product disparagement) that Microsoft can imagine.³⁸

In addition, under Section III.A of the PFJ, Microsoft may, *sua sponte*, terminate an OEM's Windows license after sending the OEM two notices stating that it believes the manufacturer is violating its license. There need not be any adjudication or determination by any independent tribunal that Microsoft's claims are correct. All that is required are two notices; after that, Microsoft may terminate an OEM's license. This provision means that the OEMs are, at any time, just two registered letters away from unannounced economic calamity; after all, given Microsoft's monopoly on the operating system, termination of an OEM's Windows license is a death sentence for an OEM's business.

Again, such inadequate safeguards are not inherent in an effective non-retaliation protection. For instance, the Litigating States' Remedial Proposal prevents Microsoft from taking any action that directly or indirectly adversely affects OEMs or other third-party licensees that in any way develop, distribute, support or promote competing products, thereby providing the type of protection contemplated by the Court of Appeals. (*See* LSRP at 13-14.) Thus, the Litigating States' Remedial Proposal clearly prohibits Microsoft retaliation for any procompetitive OEM behavior and prohibits all forms of Microsoft retaliation. Importantly, the LSRP also prohibits Microsoft from retaliating against any individual or entity for participating in any capacity in any phase of this

³⁸ For example, the PFJ does not appear to foreclose a Microsoft strategy whereby OEMs would be told that senior Microsoft executives and spokespeople will opine that the product of OEM X works better than the product of OEM Y, if OEM Y refuses to install only Microsoft applications.

litigation. Again, it is the LSRP that meets the Court of Appeals' objectives for this case – not the PFJ.

D. The PFJ Does Nothing To Remedy Microsoft's Illegal Campaign To Eliminate Java.

Yet another aspect of the trial court's decision that was upheld on appeal by the D.C. Circuit was the District Court's finding that Microsoft's actions in eliminating the threat posed by Sun Microsystems' Java technology were unlawful under Section 2 of the Sherman Act. *See Microsoft*, 253 F.3d at 74-75. The PFJ, however, omits any remedy for this core abuse. Thus, unlike either the District Court's remedy or the remedy Judge Posner suggested, the PFJ does not protect those specific products, such as Java, that actually compete with Windows today and offer alternatives to Microsoft's dominance.

The Litigating States' Remedial Proposal addresses this deficiency by requiring that Microsoft distribute Java with its platform software for a period of ten years. (*See* LSRP at 17-18.) The LSRP recognizes, as did the District Court and Judge Posner, that in order to ensure that rival products such as Java can compete with Microsoft, they must receive the widespread distribution that they could have obtained absent Microsoft's unlawful behavior.

The requirement that Microsoft distribute Java with its operating system and Internet Explorer browser takes on even greater importance in light of Microsoft's recent behavior. For example, although the Court of Appeals upheld the trial court's finding that Microsoft targeted and destroyed independent threats from the Java programming language, *see Microsoft*, 253 F.3d at 53-56, 60, Microsoft announced less than a month later that it was dropping any support for Java from Windows XP. As *The Wall Street Journal* reported at

the time, ““This favors Microsoft’s new technologies, and will inconvenience consumers. . . . [I]f you want your Web page accessible to the largest number of people, you may want to drop Java’ and switch to Microsoft’s competing set of products, which is under development and is known as .NET.””³⁹ Thus, notwithstanding the Court of Appeals’ holding that Microsoft illegally maintained its monopoly by requiring major independent software vendors to promote Microsoft’s JVM exclusively (*i.e.*, by requiring developers, as a practical matter, to make Microsoft’s JVM the default in the software they developed), Microsoft is again acting illegally to maintain – and further entrench – its operating system monopoly against Java’s middleware threat.

To remedy the specific and extensive anticompetitive tactics aimed at Java, as found by the District Court and affirmed by the Court of Appeals, Microsoft should be ordered – as outlined in the Litigating States’ Remedial Proposal – to distribute with its platform software a current version of the Java middleware. This would ensure that Java receives widespread distribution, thus increasing the likelihood that it can serve as a viable competitive platform to Windows. Although rivals such as Java will likely remain small players compared to the dominant Windows OS, their existence on the competitive fringe is critical to provide some competitive discipline to Microsoft on pricing and coercion matters. Moreover, the existence of these rivals creates a base for future developments that might one day provide true alternatives to Windows.

³⁹ John R. Wilke and Don Clark, *Microsoft Pulls Back Its Support for Java: New Windows XP System Won't Include Software Needed to Run Programs*, The Wall Street Journal, July 18, 2001.

E. The PFJ Includes A “Gerrymandered” Definition Of Middleware.

Though not readily apparent, the effectiveness, or lack thereof, of the PFJ’s restrictions on Microsoft’s behavior heavily depends on the proposed agreement’s definition of “middleware.” Under the proposed settlement, OEMs are protected from retaliation and can promote competitive alternatives to Microsoft products only in the area of middleware. Thus, if rival software falls outside of the definition of middleware, Microsoft can essentially use its coercive might to prevent that software from being distributed via OEMs. Conversely, if a Microsoft product is not classified as middleware, Microsoft is permitted to use coercion to force its adoption and promotion.

The PFJ adopts a new, and greatly narrowed, definition of middleware, both in terms of “Microsoft Middleware Products” and “non-Microsoft Middleware.” The result is significant because under the newly created definition, Microsoft may be able to subvert many of the PFJ’s restrictions. The Litigating States’ Remedial Proposal defines middleware in a manner consistent with the definition adopted by both the District Court and the Court of Appeals.⁴⁰ It thus prevents Microsoft from using a definitional shell game to avoid changing its unlawful behavior.

The District Court and the Court of Appeals adopted the same definition of middleware: software products that expose their own APIs; are written to interoperate with a variety of applications; and are written for Windows as well as multiple operating systems. *See Microsoft*, 253 F.3d at 53; *see also* Findings of Fact, 84 F. Supp. 2d at 17-18, ¶¶ 28-29. Thus, while the D.C. Circuit discussed browsers and the Java technologies as leading examples of middleware, *Microsoft*, 253 F.3d at 59-78, it never adopted an exclusive list

⁴⁰ (See States’ Proposed Text ¶ 22(w).)

limited to specific products (as the PFJ does).⁴¹ Importantly, the Court of Appeals also agreed with the District Court that the appropriate category of “middleware” applications that merit protection against Microsoft’s anticompetitive conduct includes any application that could operate separately or together with other such applications to create even the “nascent” potential for alternative platforms that could compete with Microsoft’s OS monopoly. *Id.* at 52-54, 59-60, 74.

These standard definitions of middleware were also endorsed in the Posner Proposal, which, as noted above, Microsoft was reportedly ready to accept last year. Section 2(3) of the Posner Proposal defined middleware broadly, to include any “software that operates between two or more types of software . . . and could, if ported to multiple operating systems, enable software products written for that middleware to be run on multiple operating systems.” Moreover, the substantive portion of the Posner Proposal, in Section 3(8)(c), explicitly included not just enumerated products, but also any “middleware distributed with such operating system installed on one personal computer to interoperate with any of the following software installed on a different personal computer or on a server: (i) Microsoft applications, (ii) Microsoft middleware, or (iii) Microsoft client or server operating systems.”

The PFJ departs significantly from these established definitions of middleware and instead adopts wholly new definitions for both “Microsoft Middleware Products,” and “non-Microsoft Middleware.” These definitions include several flaws that Microsoft may be able to use to anticompetitively advantage its applications, continue to profit from the fruits

⁴¹ See also *Microsoft*, 253 F.3d at 59 (referring to browsers as exemplary of “any middleware product, for that matter”); *id.* at 74 (Java is a set of technologies that “is another type of middleware posing a potential threat to Windows’ position as the ubiquitous platform for software development”).

of its illegally maintained monopoly, and evade the practical consequence of the PFJ for many product lines.

To start, the PFJ's definition of "Microsoft Middleware Products" appears to limit this category to five specifically-listed existing products and their direct successors.⁴² This makes no sense for two reasons. First, why define the most critical term in the proposed settlement narrowly when Microsoft has already demonstrated its skill at evading consent judgments? And second, why does the list include certain Microsoft products, but arguably not their virtually indistinguishable cousins: *i.e.*, Outlook Express, but not Outlook; Windows Messenger, but not MSN Messenger; the Microsoft JVM, but not MSN RunTime; Internet Explorer, but not MSN Explorer. Likewise, Microsoft middleware applications such as the MSN client software and Passport appear to be excluded. The significance of these omissions cannot be overstated. For example, although Microsoft must allow OEMs, under the PFJ, to remove end-user access to Internet Explorer, the decree's language appears to allow Microsoft to ban any effort to replace MSN Explorer with a competitor. This is a step backwards from the *status quo*.

Additionally, Section III.H.2 of the PFJ explicitly limits OEM flexibility to set non-Microsoft Middleware as a default so that it can be automatically invoked: the PFJ appears to allow OEMs to do so only with competitors of "Microsoft Middleware Products" that (1) appear in separate Top-Level Windows, with (2) separate end-user interfaces or trademarks. Thus, Microsoft might be able to avoid the PFJ's provisions simply by embedding Microsoft middleware with other middleware, or not branding it with a

⁴² The PFJ does contain a generic middleware definition, *see* Section VI.K.2, but this applies only to new products, and therefore does not capture any product now in existence.

trademark. That means Microsoft – not the OEMs, and certainly not the market – would determine the scope of desktop competition and the pace of desktop innovation.

Conversely, the definition of the rivals to Microsoft Middleware Products – “non Microsoft Middleware Product” – is also jury-rigged to advantage Microsoft. Under Section IV.N of the PFJ, protected middleware products are limited to those applications “of which at least one million copies were distributed in the United States within the previous year.” Thus, developers have no protection from Microsoft’s well-honed predatory tactics until they can obtain substantial distribution.

The PFJ’s middleware definition also does not explicitly include web-based services, the most important future platform challenge to the Windows monopoly. These web-based services represent an important and growing type of middleware, and the PFJ’s failure to explicitly cover them may allow Microsoft to recreate and extend its desktop monopoly to new platforms.⁴³

The newly created and narrowly crafted definitions of middleware in the PFJ pave the way for Microsoft to avoid many of the prohibitions on its conduct. The middleware definitions in the LSRP, on the other hand, are consistent with those endorsed by the District Court and Court of Appeals, and ensure that the protections from Microsoft’s illegal conduct are extended to Microsoft’s competitors in critical middleware markets.

F. The PFJ Lacks A Meaningful Enforcement Mechanism.

For any remedy against Microsoft to be effective, it must include a strong, timely, and meaningful enforcement mechanism. The PFJ creates an extraordinarily weak

⁴³ See Rebecca Buckman, *Microsoft Says Its Future Lies in Subscriptions*, The Wall Street Journal, May 31, 2001.

enforcement authority – one that likely will be overwhelmed and co-opted by Microsoft. More specifically, as currently drafted, there are two principal problems with the PFJ’s enforcement mechanism.

First, the proposed decree leaves all enforcement to a single, three-person Technical Committee (“TC”). With no looming antitrust proceedings to put pressure on Microsoft to behave, Microsoft will have every incentive to hinder the efforts of the TC. Moreover, Microsoft will have substantial insights and influence over the TC – Microsoft will appoint at least one member of the TC (the first two members will appoint the third); the TC will be stationed full-time on Microsoft premises; and the TC will rely for many types of enforcement on a compliance officer hired and paid for by Microsoft. In light of all this, it would be easy to imagine a situation where the TC, during the entirety of its existence, never took a single action critical of or hostile to Microsoft, no matter what behaviors Microsoft engaged in.

Second, the enforcement authority has no power other than the authority to investigate. The TC cannot expedite claims, assess fines, or otherwise move quickly to redress Microsoft’s illegal behavior. If the TC finds any abuse, its only recourse will be to the courts, through mini-retrials of *United States v. Microsoft*. Moreover, under Section IV.D.4.(d) of the PFJ, the TC is prohibited from using any of its work product, findings, or recommendations in any court proceedings. Thus, even if the TC eventually refers a matter to the courts, the proceedings will have to start from scratch. The history of the 1994 consent decree shows the futility of this type of approach.

By contrast, the Litigating States’ Remedial Proposal recommends the creation of a Special Master who is empowered and equipped to investigate Microsoft’s

behavior in a manner that is prompt and resolute. The appointment of a Special Master with defined remedial powers is essential if Microsoft's unlawful behavior is to be curbed and competition restored to the marketplace. Thus, the creation of a Special Master provides for a mechanism that is much more effective in ensuring Microsoft's compliance with the settlement decree, and does not suffer from the defects identified above in the PFJ's TC proposal.

First, unlike the TC in the PFJ, a Special Master, as selected by the Court, would be independent. He or she would not be dependent on Microsoft for resources, appointment, or other needs.

Second, under the Litigating States' Remedial Proposal, the Special Master would have the authority to identify, investigate, and quickly resolve enforcement disputes. For example, under the States' proposal, the Special Master would have the power and authority to take any and all acts necessary to ensure Microsoft's compliance. (*See* States' Proposed Text ¶ 18(b).) The Special Master would have the benefit of both business and technical experts. (*See id.* ¶ 18(d).) Upon receipt of a complaint, it would be required to make an initial determination of whether an investigation is required within fourteen days. After notifying Microsoft and the complainant of its decision to investigate, Microsoft would then have fourteen days to respond. After Microsoft's response, the Special Master would be required to schedule a hearing within twenty-one days, and fifteen days after the hearing, would be required to file with the Court its factual findings and a proposed order. (*See id.* ¶18(f).)

Unlike the enforcement mechanism in the PFJ, the creation of a Special Master as outlined by the States would prevent disputes over Microsoft's compliance from

becoming wars of attrition that would drain the system and guarantee Microsoft victory. The history of this case, and of antitrust regulation in general, suggest the need for an enforcement mechanism that can ensure the timely resolution of any disputes and minimize any demand on judicial resources. The enforcement provisions contained in the Litigating States' Remedial Proposal accomplish these objectives.

V. THE CIRCUMSTANCES OF THIS CASE STRONGLY MILITATE IN FAVOR OF GATHERING EVIDENCE AND TESTIMONY – EITHER IN A HEARING, OR THROUGH THE USE OF THE RECORD FROM THE REMEDIAL PROCEEDING – TO DETERMINE IF THE PFJ MEETS THE PUBLIC INTEREST TEST.

We believe, for the reasons presented above, that the PFJ fails the Tunney Act's "public interest" test and should be rejected. At the very least, however, there is ample basis for the Court to conclude that a rigorous hearing is needed to air the objections to the PFJ and resolve the doubts that the Court hopefully has about the proposed decree. While it need not be a lengthy proceeding, the Court may also want to consider accepting evidence and taking testimony – or alternatively, making use of record evidence it will receive in the upcoming proceeding concerning the LSRP. The question of what can be learned about the PFJ's prospects for effectiveness, since its partial implementation began in July (and, in other respects, December), is especially critical, and would benefit from additional fact-finding by the Court.

A. The Complexity And Significance Of This Case – And The Inadequacy Of The CIS – All Militate In Favor Of A Hearing On The PFJ.

Of all the cases in which courts have reviewed proposed consent decrees to make a public interest determination under the Tunney Act, the case most similar to the present action is *American Tel. & Tel. Co.*, 552 F. Supp. at 131, *aff'd sub nom Maryland v.*

United States, 460 U.S. 1001 (1983), in which Judge Greene subjected the government's proposed consent decree with AT&T to intense judicial review.⁴⁴ In *AT&T*, the court recognized that the proposed settlement not only would dispose of "what is the largest and most complex antitrust action brought since the enactment of the Tunney Act, but [] itself raises what may well be an unprecedented number of public interest questions of concern to a very large number of interested persons and organizations." *American Tel. & Tel. Co.*, 552 F. Supp. at 145.⁴⁵ In light of the size and the complexity of the case,⁴⁶ as well as its "unfortunate history" and the interests of third parties, the court held an extensive hearing to address key issues raised by the consent decree and the comments of interested parties. *Id.* at 147, 152. The case for an extensive hearing on the PFJ in this proceeding is overwhelming for similar reasons.

First, this is an extremely complicated case, to say nothing of the profound consequences any settlement will ultimately have on the computer and Internet industries. The economic significance of the computer industry is unquestioned. In such an environment, expert economic analysis is critical to help the Court not only understand the incentives that will drive Microsoft's response to any proposed settlement, but also assess whether the PFJ will succeed in bringing the monopolist's unlawful behavior to an end and

⁴⁴ Similar to the case at hand, Judge Greene in *AT&T* had a well-developed factual record on which to base his public interest determination. In *AT&T*, the parties reached their settlement following a period of discovery, pretrial motions, and an eleven-month trial. Shortly before the evidence phase was to end, the Department of Justice and the defendant agreed upon, and submitted to the court, a proposed final judgment. Here, of course, the proposed consent decree was reached after a full trial on the merits, as well as an affirmance by the Court of Appeals, upholding the District Court's findings of liability against Microsoft.

⁴⁵ The court also acknowledged that if approved, the proposed decree "would have significant consequences for an unusually large number of ratepayers, shareholders, bondholders, creditors, employees and competitors," and would affect "a vast and crucial sector of the economy." *Id.* at 152.

⁴⁶ The Senate sponsor of the Tunney Act, Senator Tunney, specifically cited a case's complexity as a factor militating in favor of conducting a hearing on the adequacy of a decree. See 119 Cong. Rec. S3453 (daily ed. February 6, 1973) (statement of Sen. Tunney).

promoting competition in a market that has long been restricted. Given the complexity of this case, the Court should not approve the PFJ without an adequate hearing to consider the many – and often technical – objections to it that will doubtlessly be raised in the Tunney Act submissions.

Second, in terms of the impact that any proposed settlement in this case will have on the public, Judge Greene’s depiction of the *AT&T* case is, once again, more than fitting here: “[t]his is not an ordinary antitrust case.” *Id.* at 151. Microsoft is one of our nation’s largest corporations. It plays a central role in one of the country’s most critical and important industries, and thus in our country’s economy. Any settlement that addresses Microsoft’s illegal conduct in a manner that is consistent with the Court of Appeals’ decision and prevailing antitrust law will have far-reaching consequences on numerous organizations, both public and private, as well as on Microsoft, its employees, shareholders, competitors, and most importantly, consumers. Thus, a hearing to consider the breadth and depth of these consequences is in order before the PFJ is approved.

Third, a hearing should be held to require the Justice Department to answer the many questions surrounding the PFJ – raised here, and doubtlessly elsewhere – that the Competitive Impact Statement ignores or fails to adequately address. Why was a new, “gerrymandered” definition of middleware used in the PFJ – instead of the definition used by both the trial and appellate courts, and in every other remedial proposal? Why was a Java-related remedy omitted, when that was such a key part of the case? Why were only some forms of retaliation, for only some procompetitive acts, prohibited? And most importantly, why does the PFJ not address all of the anticompetitive wrongs that were found at trial, and upheld on appeal – including, most especially, Microsoft’s unlawful tying? These questions

are not answered by the CIS, as the Tunney Act directs and the public interest demands, and as the Court would surely desire. A full review of these questions, and many others, is needed by the Court before it can approve the PFJ (if it is inclined to approve the PFJ).

Thus, in light of the specific objections from third parties revealing the PFJ's numerous deficiencies – and the oddity of the differing remedial proposals now before the Court – the Court should hear oral argument and, if necessary, take additional testimony. Giving the government an opportunity to explain the omissions in its proposed settlement, and third parties the opportunity to demonstrate the efficacy of the litigating states' proposal, will afford the Court the necessary basis on which to make its public interest determination in this important and unprecedented case.

B. The Court Should Conduct A Proceeding – Taking Evidence And Hearing Testimony, If Necessary – To Determine How The PFJ's Provisions Have Functioned Since Some Were Put In Place In 2001.

A second rationale for a hearing is to develop a factual record concerning the point we make in Section II, *supra*: namely, that the Court can assess the prospects for the likely effectiveness of the PFJ by seeing how those provisions that have been implemented are starting to work – or not – in practice.

Above, we have suggested that the empirical record developed in the PC industry since Microsoft's July 11, 2001 announcement of "greater OEM flexibility for Windows," and since Microsoft began to implement many of the PFJ's remedial provisions on December 16, 2001, should be examined carefully by this Court as it determines whether the PFJ is in the "public interest." We also express the view that these provisions have, in fact, been ineffectual in promoting competition and are showing no signs that they will yield

change in the competitive position of non-Microsoft middleware – and as a result, cannot be said to be in the public interest.

At the same time – while we doubt it, seriously – we recognize it is theoretically possible that there may be reasons why these provisions have not yet shown signs of effectiveness, but would be effective over time. At least, that is what Microsoft and the Justice Department are likely to assert. If the Court is inclined to give these assertions any credence, that is all the more reason for the Court to conduct a proceeding – taking evidence and hearing testimony, if necessary – to make a determination on such claims based on empirical evidence, rather than relying upon hypothetical contentions or abstract theories. Such a proceeding is authorized by the Tunney Act, *see* 15 U.S.C. § 16(f), and would be appropriate in this instance.

Evidence and testimony from the OEMs can make clear whether they are taking advantage of the “new flexibility” ostensibly being provided under the PFJ – and if not, why not. Given the OEMs’ likely fears of retaliation from testifying in such a proceeding – as reflected by their apparent (and understandable) reluctance to testify in the remedial proceeding – the Court may want to consider appointing a Special Master to take evidence from the OEMs confidentially.⁴⁷ Likewise, evidence and testimony from non-Microsoft middleware companies can indicate how the provisions of the PFJ, after they have been in place for several months, are – or are not – enabling them to compete with Microsoft. The same can be said for OS rivals to Microsoft.

⁴⁷ The Court is authorized to appoint a Special Master to conduct inquiries as part of this Tunney Act proceeding. *See* 15 U.S.C. § 16(f)(2). Making a determination as to why OEMs have failed to use their “new found freedoms” – and whether they are likely to do so in the future – would seem to be a task well suited to a Special Master.

The point is that while we firmly believe that the publicly available information and reports all indicate that the PFJ's provisions, as implemented since December 16th (and the browser-related PFJ provisions, as implemented since July 11th), have done little or nothing to promote competition, the Court may wish to base such a conclusion upon a judicially developed record that would allow both proponents and opponents to offer explanations and evidence in support of their views. Such a proceeding could be of a more informal nature, *i.e.*, the Court could solicit comments from the relevant parties and industry experts; or it could be conducted by a Special Master, as we suggest above; or it could be a more formal, trial-type undertaking. All of these approaches are authorized under the Tunney Act, which grants wide discretion to the court to adopt whatever form of proceeding it considers most effective. *See* 15 U.S.C. § 16, *passim*.

But on one point, the Act, or at least its legislative history, is rather firm: “[T]he court must obtain the necessary information to make [a] determination that the proposed consent decree is in the public interest.” 1974 U.S.C.C.A.N. 6535, 6538-39 (H.R. Rep. 93-1463, quoting S. Rep. 93-298, at 6-7 (1973)) (emphasis added). Some sort of proceeding to examine these questions is justified in these circumstances,⁴⁸ and could be helpful to the Court in its consideration of the practical effects of the PFJ.

C. In Making Its “Public Interest” Determination, This Court Should Take Into Account The Evidence That Will Be Adduced In The Upcoming Remedial Proceeding.

Finally, the Court should take advantage of the Tunney Act's broad procedural flexibility to use the record evidence that will be amassed in the upcoming

⁴⁸ While Congress made clear, in enacting the Tunney Act, that such hearings were to be the exception, and not the rule, *see* 1974 U.S.C.C.A.N. 6535, 6539 (quoting S. Rep. 93-298, at 7 (1973)), this may well be one of those cases where an evidentiary inquiry is called for.

remedial proceeding as it make its “public interest” determination in this review. The Court’s Tunney Act review of the PFJ in this proceeding can be substantially assisted by the record developed in the forthcoming proceeding on the LSRP. As we have argued, the Court’s objectives in both proceedings are the same – namely, to terminate Microsoft’s illegal conduct, prevent the recurrence of such conduct, and create a market structure in which competition does not simply exist in theory, but actually yields real alternatives to Microsoft’s products. Moreover, the Court’s analysis in both proceedings is guided by the same legal principles. *See* Section I, *supra*.⁴⁹

Many of the questions the Court must answer in the course of reviewing the PFJ – *e.g.*, What sort of anti-retaliation provisions are needed to empower OEMs and foster real competition? Must third parties be empowered to promote competition through offering alternatives to the ‘Windows bundle’ for a remedy to be effective? – will be addressed, in whole or in part, in the remedial proceeding. To the extent that these questions can only be answered by hearing testimony from some of the same individuals and the same sources in the remedial proceeding, the Court’s reliance on that evidence in this proceeding would result in a more comprehensively informed review, streamline the Court’s resolution of the issues, and lead to a much more efficient use of judicial resources.

The Tunney Act itself grants the Court wide discretion to undertake any procedures it “may deem appropriate” in making its public interest determination. 15 U.S.C. § 16(f)(5). This includes using evidence from another proceeding. *See American Tel. & Tel.*

⁴⁹ This is not to say that the PFJ should be rejected merely because it is not identical to the remedy that the Court might impose in the remedial proceeding. *See supra* note 2. Conversely, acceptance of the PFJ would not preclude the Court from imposing a different remedy in the proceeding being pressed by the litigating states.

Co., 522 F. Supp. at 136. As the court noted in *AT&T*, “[i]n a Tunney Act proceeding the Court is not limited by the rules of evidence but may take into account facts and other considerations from many different sources.” *Id.* at 136 n. 7 (emphasis added). In that case, the court relied on a report by the Antitrust Subcommittee of the House Committee on the Judiciary, which had conducted an investigation of the matter, to fill in gaps left in the court record. *Id.* at 136. If a court can weigh an evidentiary record compiled by the Congress, it surely can weigh an evidentiary record of its own creation in a related proceeding.⁵⁰

The Court is currently overseeing a wide range of discovery, both written and oral, in the remedial proceeding. Testimony will presumably be taken from a host of witnesses that will establish, among other things: how Microsoft deals with OEMs, including how various Microsoft practices limit OEM flexibility in configuring the desktop;⁵¹ how Microsoft has used the commingling of code, and other forms of binding its middleware to the OS, to reinforce the applications barrier to entry; how Microsoft has used discriminatory and anticompetitive licensing agreements to limit the distribution and use of rival products; how Microsoft’s illegal conduct has worked to destroy Java; how Microsoft’s

⁵⁰ Although the circumstances in which the *AT&T* court considered the subcommittee’s report are different from those here, the Tunney Act clearly allows this Court to rely on evidence from a variety of sources. The legislative history of the Act makes clear that Congress did not intend to limit the techniques a court could use to make its public interest determination. *See* 1974 U.S.C.C.A.N. 6535, 6539 (quoting S. Rep. No. 93-298, at 6 (1973)) (“Section 2(f) sets forth some techniques which the court may utilize in its discretion in making its public interest determination. It is not the intent of the Committee to in any way limit the court to the techniques enumerated.”). Indeed, Congress anticipated that by giving trial courts wide discretion to collect evidence and conduct procedures in the way they saw fit, courts would be able to adduce the necessary information in the least complicated and most efficient manner possible. *See id.* (“The Committee recognizes that the court must have broad discretion to accommodate a balancing of interests . . . It is anticipated that the trial judge will adduce the necessary information through the least complicated and least time-consuming means possible.”).

⁵¹ As we note above, the OEMs appear understandably reluctant to testify in the remedial proceeding. This is all the more reason to use a Special Master (or other procedural device) to ascertain confidentially their views of the PFJ’s provisions and the likely effectiveness of those provisions. *See supra* note 47 and accompanying text.

.Net initiative repeats the illegal monopoly leveraging tactics it successfully used to decimate Netscape; how Microsoft's concealment of APIs degrades the performance of non-Microsoft products and services; and how Microsoft has manipulated industry standards and developed proprietary standards and formats that limit the interoperability of competing products.

This evidence, which will be presented during the Court's remedial hearing later this Spring, will form the basis on which the Court crafts its remedy in the ongoing litigation. It is our view that this evidence will affirmatively demonstrate why the LSRP, and not the PFJ, fulfills the mandate of the Court of Appeals and comports with well settled antitrust law. By the same token, it will also demonstrate why the PFJ fails to redress Microsoft's illegal behavior in a manner consistent with the public interest.

Because many of the questions the Court faces in this proceeding mirror those in the remedial proceeding, the Court should take the record evidence from the remedial proceeding into account in conducting its Tunney Act review of the PFJ. Simply put, by utilizing this evidence, the Court will adduce the information it needs to make its "public interest" determination in a manner that encourages greater efficiency and avoids unnecessary delay or duplication.

CONCLUSION

The Court should refuse to find that entry of the PFJ is "in the public interest." The PFJ does not unfetter the market from Microsoft's dominance; it does not terminate the illegal monopoly; it does not deny to Microsoft the fruits of its statutory violations; and it does not end Microsoft's practices that are likely to result in monopolization in the future.

More specifically, the PFJ does not even attempt to address, let alone end, Microsoft's illegal binding and bundling practices that have done so much to fortify its OS

monopoly and to harm desktop competition. And its limited provisions are so filled with loopholes and exceptions that they are rendered ineffective.

At the very least, the Court should refuse to approve the PFJ until after it has concluded an extensive review, including an inquiry into whether the PFJ's provisions – as implemented by Microsoft since last year – are showing signs of effectively restoring competition to the marketplace. The Court could conduct an evidentiary hearing, appoint a Special Master, and/or rely upon the record that will be adduced in the trial on the Litigating States' Remedial Proposal to meet its evidentiary needs.

In the end, it is the proposal of the litigating states – not the PFJ – that meets the public interest standard. The Court should reject the PFJ, and impose a strong, effective and forward-looking remedy that addresses Microsoft's proven anticompetitive conduct in a manner consistent with the mandate of the Court of Appeals and the nation's antitrust laws.

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ATTORNEYS FOR AOL TIME WARNER, INC.

ATTACHMENT A

**Microsoft's Tying Strategies To Maintain
Monopoly Power In Its Operating System
(Civil Actions No. 98-1232 and 98-1233 CKK)**

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I. INTRODUCTION

1. We have been engaged in this case as professional economists¹ to assess the economic incentives and effects of Microsoft's tying practices. Our specific charge is to determine whether Microsoft is tying middleware applications to its operating system ("OS") in a manner that protects and reinforces its monopoly power in the market for operating systems. Middleware is software that runs on the OS platform, *i.e.*, that calls on the basic operating system through application programming interfaces ("APIs") of the OS in order to invoke functions of the OS, but which in turn contains its own published APIs that allow higher-level applications to run on the middleware itself.² To execute our mandate, we have reviewed the economic incentives at play in this market, conducted interviews with various software developers, and studied the key documents in this case, including the Proposed Final Judgment and the Competitive Impact Statement of the U.S. Department of Justice, the submissions made on behalf of Microsoft, and the Comments Of AOL Time Warner On The Proposed Final Judgment.
2. Based on our analysis, we conclude that Microsoft has tied its middleware applications to its Windows operating system in ways that preserve and reinforce its monopoly power in the market for operating systems on PCs, damaging competition and harming consumers. The anti-competitive use of tying strategies to maintain a monopoly in this manner is, in our understanding, a violation of Section 2 of the Sherman Act. We conclude that market forces alone do not discipline Microsoft to limit the integration of middleware code into its OS or the bundling of middleware products with its OS to efficiency-enhancing levels. Rather, Microsoft has the ability to tie in ways that lack pro-competitive justification, and in any event has incentives to use tying strategies to integrate applications into its OS more aggressively than justified by efficiency.
3. We begin in the next section with a brief description of the tying strategies at Microsoft's disposal. We then demonstrate through economic analysis that Microsoft has substantial

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² Middleware and operating systems, *i.e.*, any software which exposes APIs so that higher level applications run on top of the software, are together referred to as platform software.

incentives to tie its middleware products to its monopoly OS to reinforce and entrench that monopoly. Given these incentives, Microsoft's history, and the evidence in this case, we conclude that Microsoft has engaged, and is engaging, in anti-competitive tying, and is doing so in a way that maintains its OS monopoly, to the detriment of consumers and competition.

II. MICROSOFT HAS MANY TECHNIQUES AT ITS DISPOSAL FOR TYING MIDDLEWARE TO WINDOWS.

4. Microsoft has various means of binding its middleware products to the Windows operating system. Before describing these practices and the ways in which Microsoft uses them to reinforce its OS monopoly, we explain the general concept of middleware and why Microsoft's licensing of middleware with its OS in the Windows package constitutes tying.
5. Middleware is exemplified by products such as Internet browsers, including Microsoft's Internet Explorer ("IE") and Netscape's Navigator, media players, instant messaging, and middleware applications platforms such as Java. By a strategy of tying middleware to the OS, we mean any constraint that Microsoft's operating system be bought with (or bound to) Microsoft middleware products, or any contractual or financial inducement to this end. Microsoft has argued that various middleware applications, especially IE and Windows Media Player ("WMP"), are essential components of an integrated operating system rather than distinct products, and that tying or bundling these products with the core operating system therefore does not constitute tying. Microsoft's argument is incorrect.
6. Middleware products, such as browsers and media players, are sold in separate markets. Users can obtain Navigator or RealPlayer without purchasing an operating system in the same transaction. Users can also obtain IE or MSN Messenger without obtaining Windows. Until Microsoft bundled WMP into Windows, users could obtain these two products in separate transactions. Moreover, these products are clearly sold by different suppliers. The Court cannot give serious weight to Microsoft's argument that once WMP, for example, is integrated into Windows, the media player ceases to be a separate

product: If this argument were accepted, then the mere fact that Microsoft integrates application code into the operating system would itself be a defense for its actions. In other words, tying, as a means of reinforcing a monopoly position, would constitute its own defense. The law, we suggest, cannot intend this.

7. Tying involves contractual arrangements whereby Microsoft puts pressure on original equipment manufacturers (“OEMs”) or end-users to acquire Microsoft applications as a condition of acquiring Windows. It includes requirements that OEMs install Microsoft applications, rather than applications developed by Microsoft’s rivals, and prohibitions on removing or uninstalling those applications. It also includes financial inducements to adopt Microsoft applications when Windows is purchased and installed. Each of these requirements is enforced through Microsoft’s coercive power to harm non-adhering OEMs.
8. Tying also involves designing the OS so that Microsoft’s applications are integrated into the OS code, leaving rival applications unnecessary or even dysfunctional. This type of tying includes: (a) basic integration of code; (b) efforts by Microsoft to hinder disintegration; and (c) efforts to hamper the interoperability of rival applications. Basic integration involves providing, as part of the OS, services previously offered as stand-alone applications. This could be done in a purely modular fashion without the commingling of application code into the kernel of the operating system. If done in this manner, the products can be easily removed and replaced with competing products in a “plug and play” fashion. Technological efforts that hinder disintegration, however, have stronger anti-competitive overtones. These include: commingling code in a manner that hampers, and perhaps even bars, the replacement of the products or default options; designing the OS so that Microsoft’s applications are chosen as default applications; making it difficult for OEMs or users to replace the icons or launch sequences; and creating utilities to “sweep” the Windows desktop and replace non-Microsoft icons.
9. Note that some of these forms of tying, such as hampering rivals’ performance, entirely lack pro-efficiency rationales, while all of them can be used in inefficient, anti-competitive manners. The remainder of this paper demonstrates that Microsoft has

strong incentives to engage in such anti-competitive, inefficient bundling, and that it is doing so in a manner detrimental to competition with the goal of maintaining its extant monopoly in operating systems.

III. ECONOMIC ANALYSIS SHOWS THAT MICROSOFT HAS SUBSTANTIAL INCENTIVES TO USE TYING TO SUSTAIN ITS OPERATING SYSTEM MONOPOLY, HARMING CONSUMERS AND COMPETITION.

10. Microsoft has maintained that its tying is efficient and that it should be allowed to determine the level of integration of applications into its operating system. Microsoft argues that it should be free to tie its products together in any fashion it sees fit, as this type of product integration is efficient and promotes innovation with eventual consumer benefits. These arguments generally claim to defend Microsoft's intellectual property, and are expressed in terms of the general advantages of product integration, rather than defining specific benefits to users from Microsoft's practice of tying particular middleware products, such as IE or WMP, into the Windows package.
11. Microsoft's claim amounts to the belief that market forces alone achieve the optimal degree of product integration and separation without any further regulatory or legal constraints. As a matter of economic theory, this argument fails to take note of Microsoft's position as a dominant producer in a market with substantial barriers to entry. For this general market-forces argument to be valid, Microsoft would need to demonstrate that competitive vigor in the market will discipline Microsoft to engage only in tying that enhances efficiency. But such complete reliance on market forces to achieve efficiency, in turn, requires open entry, while the evidence in this case has shown that there are significant barriers to entry in the OS market. This leaves Microsoft in a position to exploit any strategic and anti-competitive motives to integrate. As a matter of market reality, as we shall explain, the evidence demonstrates that Microsoft has engaged in tying to an excessive degree, with the sole purpose of achieving anti-competitive aims in general and OS monopoly-preserving aims in particular.
12. With respect to the practices of tying middleware, Microsoft's interests are not aligned with those of competition and consumers: Microsoft can benefit without improving its product by using tying strategies to reinforce and strengthen its existing OS dominance.

A. As a general matter, absent legal constraints, Microsoft possesses substantial economic incentives to integrate its products in a manner that reinforces its OS monopoly.

13. Below, we set forth four theories that explain why Microsoft's practice of integrating its applications with the Windows OS helps to maintain its OS monopoly, in a way that is detrimental to consumers and competition. First, tying helps to sustain the applications barrier to entry, and thus serves to enhance Microsoft's OS dominance. Second, tying deters direct challenges to Windows' position as the dominant platform and thereby maintains or enhances Microsoft's OS dominance. Third, tying involves dynamic leveraging that permits Microsoft to achieve a monopoly in complementary applications as insurance against any possible erosion of the OS monopoly. Put another way, a monopolist, such as Microsoft which produces a pair of perfectly complementary products, aims to protect its full monopoly power by ensuring its future monopoly in at least one of the complementary products. Fourth, tying permits Microsoft to mitigate the competitive constraints on its operating system monopoly provided by previous releases of the OS. These four theories are not mutually exclusive; each of them contributes to a full understanding of Microsoft's anti-competitive conduct. And, to make matters worse, each of these anti-competitive results is mutually reinforcing because of the network effects operating between the applications sector and the operating system market.

(1) Microsoft ties its applications to its operating system as a way of sustaining the applications barrier to entry.

14. Microsoft has a general incentive to engage in anti-competitive tying to protect its dominance in operating systems against the possibility of competitive developments in applications markets. The first means by which it accomplishes this is through enhancing the applications barrier to entry.³ The dominance of the Windows standard in a wide range of applications, or in a few particularly important applications, makes entry into the operating system market more difficult because an entrant has to offer both a new operating system and a full set of applications, or somehow rely on the chance that applications will quickly develop once the new operating system becomes available. In this way, an entrant faces a "chicken-and-egg" problem because of the indirect network

³ See *U.S. v. Microsoft*, 84 F. Supp. 2d 9 (D.D.C. 1999) ("U.S. Findings of Fact"), ¶¶ 36-44.

effects in the operating system: the entrant could not succeed without a set of applications available to purchasers of its operating system; yet, few software developers would invest in the development of new applications based on an operating system without a large market share. This is referred to as the applications barrier to entry. The dominance of Windows as a standard for applications leads to the applications barrier to entry and growth in the operating system market.

15. Microsoft is able to sustain this barrier by exploiting a collective action problem among buyers. When Microsoft ties by supplying the OS with an application such as IE or WMP, users must incur a series of costs to replace the application. These costs include purchasing or downloading the substitute browser or media player, installing the application, and incurring any uncertainty associated with the possible compromise in the functional integrity of the system. In an application market, buyers would collectively be better off if each incurred the costs of purchasing from competing suppliers, because doing so would ensure greater competition in the future application market. However, Microsoft's tying practices preclude this result.
16. Buyers' purchase decisions with respect to either the operating system or applications collectively affect the future market structure because Microsoft will achieve dominance if most buyers choose Microsoft products. Once Microsoft achieves dominance, network externalities sustain this dominance so that the market structure becomes a monopoly as a result of buyers' previous purchase decisions. The impact of each buyer's purchase decision on the future market structure, however, is negligible. Moreover, buyers do not take into account the impact of their purchase decisions on other buyers. As a result, even a small disadvantage to purchasing a competing product in the operating system or applications markets is enough to make the individual buyer prefer Microsoft's product. The result is that buyers' decisions make them collectively worse off. The future dominance of Microsoft and the higher prices faced by buyers are a result of their collective decision to purchase Microsoft's applications. Microsoft exploits this

collective action problem and pursues dominance in the applications markets through its tying practices.⁴

(2) Microsoft ties applications to its operating system as a way of deterring direct challenges to Windows' position as the dominant platform for software developers.

17. Microsoft's incentives for anti-competitive tying are particularly strong in the case of applications that might allow for the development of direct substitutes to the monopolized operating system. A clear incentive for Microsoft to tie its IE browser with Windows has been the threat that Netscape, either individually or combined with Java software, could eliminate Microsoft's network advantages in the operating system, by providing middleware (which serves potentially as universal translation support between any application and any operating system) that would provide a competing platform for software developers. This was a particular threat to Microsoft's dominance in operating systems because it potentially represented a platform/programming environment in which software applications could be developed without regard to the underlying operating system. Middleware provides a layer of software between applications and the operating system and can accommodate a new operating system with a change in a single set of code. Without middleware, the success of a new operating system would depend on the development of new code by every application developer. This incentive also explains Microsoft's initiatives to develop a Microsoft version of Java in an attempt to undermine the universal-translator aspect of Java.
18. Some economists have argued that the backwards compatibility of Microsoft's version of Java, *i.e.*, the ability of all general Java applications to run on Microsoft's version, rules out the hypothesis that Microsoft designed its version of Java for the purpose of stifling

⁴ In the economics literature, modern theories of anti-competitive exclusion, including tying as exclusionary, are linked by the theme that exclusionary contracts have an impact on individuals outside an individual buyer-seller contract. See Dennis Carlton and Michael Waldman (2001) "The Strategic Use of Tying to Preserve and Create Market Power in Evolving Industries," unpublished working paper; Eric Rasmusen *et al.*, (1991) "Naked Exclusion," *American Economic Review* 81(5): 1137-1145; Michael Whinston (1990) "Tying, Foreclosure, and Exclusion," *American Economic Review* 80(4): 837-859; and Philippe Aghion and Patrick Boulton (1987) "Contracts as a Barrier to Entry," *American Economic Review* 77(3): 388-401.

the potential threat to its dominance in operating systems.⁵ This argument is wrong in its static assumption about compatibility. Given the history of the industry, the fact that Microsoft's initial version of Java was universally compatible with Java applications does not lead one to believe that if Microsoft dominated not just browsers but also Java in the future, it would continue to assure both compatibility of applications and free distribution of the pair of middleware products. Were Microsoft to establish dominance in the potential browser-Java bypass of its operating system dominance, why would it allow the bypass to be freely and effectively available? The concerns expressed by Microsoft's executives about the risks of "commoditization" of the operating system are well known.⁶

19. Middleware generally has the potential to act to varying degrees as a universal translator between an operating system and specific applications, because (as the name suggests) middleware intermediates between the operating system and applications: it invokes calls through an operating system's APIs and in turn issues its own APIs to applications. To accommodate a new operating system, instead of each application requiring re-coding for compatibility, only the "bottom half" of the middleware application must be reprogrammed. If twenty applications run on top of a particular middleware program, for example, compatibility with a new operating system could be achieved by reprogramming the middleware program instead of reprogramming each application. Middleware thus mitigates the indirect network effects of the operating system – and could potentially diminish the dominance of any operating system that these network effects support.

⁵ "Microsoft's Java virtual machine ... allowed for all programs written for the original ("pure") Java to be run on it. Thus it preserved *backward* compatibility with the original Java that ran on all operating systems. Because of that, Microsoft's actions were not anti-competitive." Nicholas Economides, "The Microsoft Antitrust Case," *Journal of Industry, Competition and Trade: From Theory to Policy*, March 2001, p. 20 of working paper version.

⁶ In a 1995 memo to his "Executive Staff and direct reports," Microsoft CEO Bill Gates stated that Netscape was "pursuing a multi-platform strategy where they move the key API into the client to commoditize the underlying operating system." (5/26/95 "The Internet Tidal Wave," PI. Ex.20, p. MS98 0112876.3.)

(3) Microsoft has incentives to tie to achieve a monopoly in complementary applications as insurance against possible future erosion of its OS dominance.

20. A common response to the argument that monopolies can profit through leveraging into a second market is that monopoly profits can be collected only once: a tie into a complementary market with an increase in the price of the tied good by a dollar will reduce the demand price of the first good by a dollar. According to this response, there is no incentive to leverage. In the simplest, static world in which there are no industry dynamics, no uncertainty, and no variation in consumer demand, this “one-monopoly theory” is correct. This theory, however, fails when there is uncertainty about the preservation of monopoly. If the initial monopoly is at some risk, then an incentive for leverage arises as insurance against the loss of monopoly profits. In the event that the first monopoly fails and the second succeeds, the monopolist will have preserved a monopoly in at least one of the markets.⁷ Consistent with the common response, having a monopoly in only one of the pair of markets is sufficient to collect the full monopoly profits. If either market’s monopoly is uncertain, the monopolist has an incentive to create monopolies in both markets, and thus increase the likelihood of being able to obtain monopoly profits in at least one market.
21. If Microsoft fears for the longevity of its operating system monopoly, or believes that operating systems are in a mature market with limited prospects for growth, it will have strong incentives to make minor sacrifices to Windows functionality in order to obtain dominance in high-growth markets. This is particularly true if the sacrifices (such as damaging relationships with OEMs and consumers by forcing them to accept an inferior browser or media player) have negligible effects on demand for Windows.
22. The greater the threat to its OS dominance in the future, the more incentive Microsoft has to establish a dominant supplier position in an application market, such as the browser or media player market. To take a hypothetical future contingency, if the development of middleware means that the future OS market turns out to be more competitive than the

⁷ This idea is developed formally in J.P. Choi and C. Stefandis (2001), “Tying, Investment and the Dynamic Leverage Theory,” *The RAND Journal of Economics* 32(1): 52-74.

current market, then Microsoft's actions to achieve dominance in the application market will leave it with dominance in one product of a pair of complementary products, rather than dominance in neither. Microsoft's incentive to establish dominance in key applications is thus strengthened by the fact that Microsoft's monopoly in the operating system market is not guaranteed to always be airtight.⁸

23. The gains from leveraging are especially strong where network effects are present in applications markets or these markets otherwise promise large potential growth in revenues for any firm that establishes early dominance.⁹ Network effects have three implications that make Microsoft's tying practices particularly effective in reinforcing its OS dominance. First, in the early stages of the market's development, purchasers will be on alert for signals of which standard will eventually become dominant, in order to reduce their exposure to later costs of converting to the dominant standard. Tying a new application with the dominant Windows operating system will send strong signals to purchasers that will help to "tip" the market toward Microsoft's favored products, particularly given Microsoft's history. Second, a feedback loop will cause both the tying and Microsoft's dominance to steadily accelerate. As Microsoft begins to gain a substantial share in an application market, it will be able to engage in more overt forms of tying, as customers grow to accept even inconvenient results from Microsoft's anti-competitive behaviors (such as poor interoperability with rivals) because of the reinforcing network effects. This, in turn, will accelerate the tipping toward Microsoft dominance. Third, once Microsoft's dominance is established, proprietary standards and continued tying will lock in this dominance, not just on current production but on future applications in the same functional space. While all of these effects promote Microsoft's dominance in applications, it is the feedback effect of this control over applications to reinforce the OS dominance that is relevant for the matter at hand.

⁸ See U.S. Findings of Fact ¶¶ 33-35, 60-64.

⁹ *Network effects or network economies* refer to the positive value that any single user derives from the number of other users adopting the same operating system. See U.S. Findings of Fact ¶¶ 39-42 and ¶¶ 65-66 for application to Microsoft. For a general description of networks and positive feedback, see Carl Shapiro and Hal Varian (1999) *Information Rules* Boston: Harvard Business School Press, pp. 173-225.

24. It may appear that any preservation-of-monopoly theory must be applied narrowly to Microsoft's monopoly power in operating systems. If this were the case, then the insurance theory of tying just described would not apply, since this theory explains why tying to establish dominance in a new market can be profitable because of the profits that can be captured in that new market, instead of why it is profitable to protect the monopoly in the operating systems market.
25. The standard "one-monopoly" theory, however, tells us that when there are two perfectly complementary products A and B, a monopoly over either, or a monopoly on both, allows the identical profits and results in the identical effects. (This theory holds in a static framework that sets aside the other three theories that we discuss.) With respect to an OS with a set of applications that are virtually universally adopted by all PC users, a monopoly over the OS alone is identical in its effect and in its incentives to a monopoly over the set of applications alone or a monopoly over both the OS and the set of applications. That is, there is only one monopoly: the economic role of tying under the monopoly-insurance theory is not creating a new monopoly, but rather preserving the monopoly (the monopoly being at least one monopoly position in the OS-applications pair). The monopoly-insurance theory thus explains the anti-competitive use of tying to preserve a monopoly in violation of Section 2 of the Sherman Act.
26. The monopoly-insurance theory of tying has the effect of reinforcing Microsoft's monopoly position even if the preservation-of-monopoly requirement of Section 2 of the Sherman Act is construed narrowly to apply only to Microsoft's existing monopoly on operating systems for PCs. The reason (discussed below) is that all of Microsoft's incentives for tying applications to Windows are mutually reinforcing. Even if Microsoft's incentive for tying were primarily to insure a monopoly in the event that the Windows OS monopoly failed in the future (the insurance theory), one effect of the tying is to reduce the chance that the Windows OS monopoly actually does fail, because of the strengthening of the applications barrier to entry. The impact is preservation, though imperfect, of Microsoft's monopoly in the operating system market.

(4) Microsoft's operating system also has durable-goods qualities that create further anti-competitive incentives for tying.

27. Part of Microsoft's argument that it should be free to "innovate" rests on the notion that an important source of "competition" in selling new versions of Windows is the existing stock of old versions of Windows.¹⁰ While it is true that the durable-goods aspect of the OS market (*i.e.*, the ability of consumers to retain their existing versions of the OS instead of buying a new version) disciplines Microsoft, it only does so in the sense that Microsoft earns fewer profits than it would in a hypothetical world in which it were to lease its OS. The claim that the OS market is, in fact, more competitive than this hypothetical market does not weaken the claim that Microsoft's position in the OS market is dominant and that its activities are illegal.
28. Moreover, this "durable good monopolist" feature of the market contains an incentive for Microsoft to engage in illegal bundling. The strategy of leasing as a means of escaping the durable monopolist's dilemma is well established and has been thoroughly analyzed by economists.¹¹ Rather than selling the product into the market in each period, if the monopolist seller of a durable good can lease the product on a period-by-period basis, it can retain complete control over the supply of the good into the market in each period. This allows the monopolist to set monopoly prices in each period instead of being constrained by the consumers' option to continue using the already-purchased stock (or version) of the product. The monopolist who leases for a period can lease both previous and current production together to achieve monopoly profits; doing so eliminates the

¹⁰ The District Court's Findings of Fact maintain that the Windows leasing agreement prohibits the user from transferring the OS to another machine so that "there is no legal secondary market in Microsoft operating systems" (§ 57). The Findings of Fact then note (§ 58) that there is a thriving illegal market. To limit this, Microsoft advises OEMs that Microsoft will charge a higher price for Windows to OEMs that do not limit the number of PCs they sell without the OS pre-installed. One might argue that the durable goods monopoly problem is eliminated by Microsoft's refusal to allow OEMs to install (without penalty) old versions of Windows. This is incorrect for two reasons: (i) increases in the price of the new version of Windows will reduce overall demand for new PCs, as users invoke the option to keep existing PCs with the old version, and (ii) there is a retail market for new versions of Windows software for installation on existing PCs. Both (i) and (ii) provide channels through which the existing stock of Windows software provides some competition for a new version of Windows (*i.e.*, it increases the elasticity of demand for the new version). If the price of a new version is increased, the demand for the new version is reduced because fewer consumers will purchase new PCs as the price increase for Windows raises the price of the overall package of the PC and the (mandated by Microsoft) new version of Windows, and because some consumers who would have purchased Windows to install on their old PCs will now refuse to do so.

¹¹ See Jeremy Bulow "Durable-Goods Monopolists," *Journal of Political Economy* 90(2): 314-332 or Jean Tirole (1988) *The Theory of Industrial Organization*, Cambridge: MIT Press, p. 81.

competitive discipline that would otherwise occur as past sales re-enter current and future markets. If Microsoft could move to a business plan of leasing rather than selling software, it would completely eliminate competition from old versions of the software: as Microsoft leases new versions of software, it could retire leases on old versions. This would serve to protect the monopoly power that Microsoft enjoys from its OS. Tying can allow Microsoft to implement this leasing strategy so as to avoid the durable good discipline. Specifically, tying the use of the OS to some complementary transaction that can be leased, or priced on a per-use basis – rather than sold – provides Microsoft with the opportunity to collect a revenue stream that is immune to the competitive discipline imposed by previous versions of the OS.

29. The escape from the durable monopolist's dilemma via leasing thus creates another incentive for tying. Tying allows Microsoft to move closer to the leasing outcome by facilitating the collection of transaction fees based on current usage.¹² The set of middleware products that potentially puts Microsoft in the position of collecting a fee on Internet transactions serves this role. These products are IE, WMP, Microsoft's Digital Rights Management ("DRM") software, as well as the .Net My Services initiative. The Digital Rights Management software, with WMP, will initially support a market for music and video products. The combination of these middleware applications, enabling the Microsoft e-commerce network, will then support the transition to Internet sales transactions of a broad variety of products. As Microsoft begins to shift its revenue structure from Windows sales to Internet transaction fees, it will seek to control the key Internet access choke points such as browsers, media players, and digital rights management. Tying facilitates this control. Moreover, Microsoft can directly charge usage fees for its media player software that it cannot charge for the OS. While the durable-goods monopoly theory of Microsoft's tying incentives can be seen most directly as a theory of the incentive to dominate applications that facilitate a leasing business plan, one important impact of dominating these applications is to preserve Microsoft's

¹² See Jeremy Bulow (1982:330) who suggests that a durable-goods monopolist may be able to achieve the leasing result through extending its monopoly to service contracts; these are analogous in principle to the application restrictions in the matter at hand.

dominance in the market for operating systems. The impact, in other words, is a preservation of Microsoft's OS monopoly.

30. As an empirical matter, versions of Windows are converging in their substitutability. This convergence of versions strengthens the durable-good monopolist incentive to tie in two ways. First, it increases Microsoft's incentive to escape the durable-good monopolist discipline on prices, since the easier it is to substitute the current version of Windows with existing versions, the stronger this discipline is. Second, there are, in principle, two ways of leasing to escape the durable-good monopoly discipline. Microsoft could rent the OS or tie it to an application and collect the corresponding stream of revenues each time the application is used. The converging substitutability of Windows' versions renders the former more difficult, increasing the incentive to escape the durable-good discipline by tying applications. Thus, the increasing substitutability among sequential versions of Windows, even if later versions are superior, reinforces Microsoft's incentives to extend its monopoly to dimensions, such as Internet sales, in which it can charge a vig¹³ or rent the application.

(5) Microsoft's anti-competitive tying incentives are mutually reinforcing and are manifest in strategies that lack any competitive justification.

31. The incentives for anti-competitive tying that we discuss are mutually reinforcing because of the network effects operating between the applications sector and the operating system market. Achieving dominance in applications (through tying) strengthens the dominance of the OS, because buyers in the OS market are more assured of available applications; the greater dominance in the OS market in turn feeds back into greater dominance in applications, since the tying strategies take the form of imposing an artificial advantage relative to applications of the dominant OS supplier. The greater Microsoft's share across all applications markets, the greater the applications barrier to entry. Greater shares in applications markets create a feedback effect of even greater dominance in the OS market. The source of this feedback effect is an "indirect network

¹³ The term "vig" or "vigorish," a term used by Microsoft, refers to a gambling house's "cut" on all bets placed in the establishment. See Allen Myerson, *Rating The Bigshots: Gates vs. Rockefeller*, The New York Times, May 24, 1998, at 4 ("The Gates crowd speaks . . . of collecting a 'vigorish' or 'vig'. . . . Now Microsoft wants to collect a vig on Internet access too.").

effect”: the greater the penetration of any operating system, the more applications will be written to it, and consequently, the more valuable the operating system will be to any user. Since the OS monopoly is not perfect, Microsoft will therefore take advantage of anti-competitive opportunities to generally strengthen the applications barrier to entry. As a general principle, therefore, any extension of Microsoft’s monopoly to a set of important applications reinforces its monopoly in operating systems.

32. Microsoft has a clear incentive to engage in tying in the form of hampering rival applications and coding its own applications to be defaults to the detriment of consumer choice. This type of tying has a negligible negative effect on the demand for Windows, and by tipping high-growth markets, could provide Microsoft with long-term profits.
33. Given that the Windows source code is both complex and proprietary, Microsoft can engage in this type of tying surreptitiously. For example, Microsoft can alter the algorithms that set “favorites” in folders and task bars so that Microsoft-preferred applications and web sites are used more frequently. In addition, Microsoft can cause subtle performance problems for rival applications in Windows environments. This type of tying, however, is consistent only with anti-competitive behavior – no efficiency benefits result from harming rivals or setting Microsoft options as defaults.

B. Microsoft’s anti-competitive incentives are particularly powerful in the markets for browsers and streaming media, as well as the adjacent markets for content-encoding, digital rights management, e-commerce, and convergence.

34. In markets with network effects and perceived similarity in product functions, directional changes in market shares can “tip” the market toward a dominant outcome because consumer expectations as to which format will dominate are self-realizing. In other words, the expectation on the part of consumers that a particular format will dominate leads each consumer to choose that format because of the rational concern that other formats will not be supported – accelerating the dominance and confirming the expectations of consumers. Consider the browser and the media player as examples.
35. In the browser market, Microsoft has achieved the dominance that it sought, and its monopoly power in the OS continues. These are related: browser dominance reinforces

OS monopoly power.¹⁴ The connection is that browser dominance increases the applications barrier to entry and simultaneously removes the direct middleware threat posed by Netscape. Both of these effects in turn serve to increase the demand for the Windows OS through network effects as buyers anticipate continued dominance of Microsoft formats in both the operating system and applications markets; the two effects thus reinforce the dominance of Windows OS.

36. Now that Microsoft has effectively achieved dominance in browsers, and through this reinforced its dominance in operating systems, the stage is set for applying the same tactics to markets for other applications. The media player market represents an important current market in which Microsoft's anti-competitive strategies are at play. In the media player market, Microsoft's first incentive for tying is to protect its dominance in the market for operating systems by deterring the development of new middleware platforms. Streaming media players will be essential for Internet browsing in the future because of their ability to enhance Internet content rendering under bandwidth constraints. If Microsoft achieves dominance in the media player market (and as noted above, the "tipping point" argument suggests that a trend to dominance can quickly translate into a highly dominant market share), any entrant into the operating system market would also have to provide a media player compatible with the WMP format.
37. For this reason, the applications barrier to entry incentive is especially powerful for streaming media players. Rival operating systems will be unable to provide a functional (*i.e.*, Windows Media Audio-compatible) media player since the Windows Media Audio format is proprietary and Microsoft refuses to universally license it.¹⁵ Because compatibility with streaming media is vital to future operating systems, Microsoft's dominance over operating systems will be ensured. The observation that Microsoft licenses the software for playing downloaded media, but not the software for streaming media, suggests that Microsoft is strategically aware of the profit-enhancing power of retaining exclusive property rights on media streaming software.

¹⁴ See U.S. Findings of Fact ¶¶ 68-72.

¹⁵ Note that licensing at a monopoly royalty would have a similar effect of foreclosing competition.

38. To elaborate: with respect to other applications, an entrant into the OS market could – at least in theory – provide an OS plus a set of applications. However, even this potential entry strategy is not available in the case of the media player application, because the use of a media player by a user depends not just on products that could be provided by the new entrant, but on the proprietary formats chosen by Internet sites using media player software. In this sense, the provider selection of Microsoft’s proprietary format creates a content-encoding barrier to entry for streaming media players. Again, this reinforces Microsoft’s monopoly power over the OS market.¹⁶
39. An additional anti-competitive incentive for dominating an application market is to secure a monopoly position in at least one product in the application/OS pair in order to achieve monopoly profits even in the event that the OS dominance is not sustained. This is discussed above in Section III.A.3. The possibility that the OS dominance is not sustained means that the joint monopolist could not necessarily collect the maximum profits through the OS price alone. Dominance of the application market would secure, or at least increase the likelihood of, monopoly profits.
40. This incentive is particularly relevant to streaming media markets. For example, the OS dominance could be at risk as consumers move to handheld devices for computing and accessing the Internet that do not require Windows OS. Presumably, however, these customers will still wish to play music and see videos on such devices. To the extent that WMP and its accompanying format achieve dominance for streaming media, Microsoft will maintain monopoly power in the pair of products consisting of the OS plus the media player. (Recall that the essential measure of monopoly in the markets for a pair of complementary products is dominance in at least one of the products.) Thus, streaming media players and formats hold the potential for Microsoft to maintain its original monopoly.

¹⁶ Microsoft’s action with respect to inducing media content providers to code exclusively with Microsoft’s proprietary formatting (in Windows Media Audio) is analogous to Microsoft’s attempt in the browser market to induce Internet content and services providers to optimize their content for its Internet Explorer software instead of the competing browser of Netscape. See U.S. Findings of Fact ¶¶ 311, 328, and 337.

41. Additionally, significant gain accrues to Microsoft if its DRM technology dominates the related market for audio and video files. Using encryption technology, DRM technology permits only users with licenses to play the packaged file. The license has a key to unlock the encryption. Should a user without a license attempt to play the file, the application initializes with an application that permits the user to acquire the license. Applications with DRM technology and Windows Media Device Manager enable the use of WMP on devices other than conventional desktop computers. Since market participants will tend to limit their investments to the likely dominant standard, Microsoft can easily become the sole provider of DRM solutions. Moreover, this will be a critical market for Microsoft, since users will require licenses for downloading, and content providers require certificates for encryption. The alternatives of mutual interoperability or even open standards are equally plausible conceptually, but not in Microsoft's interests. Microsoft thus has incentives to use tying to ensure that its DRM solution remains proprietary and becomes dominant. Microsoft can ensure this outcome by making its media player format the format of choice for both users and content providers, and tying WMP to Windows ensures this choice. Once again, this creates a content-encoding barrier to entry that permits Microsoft to maintain its monopoly power in the pair: OS plus WMP as an application.
42. Because of the durable-goods nature of Microsoft's OS monopoly, as described in Section III.A.4 above, Microsoft has additional incentives to tie streaming media technologies to the OS. Indeed, the greatest value for locking in the dominant streaming media and DRM formats may be the vig that Microsoft hopes to collect from Internet transactions.¹⁷
43. Dominating the media player format so as to collect a vig on transactions would position Microsoft to collect transactions revenue that may well exceed revenues available from Windows software licenses alone – even if Microsoft's dominance of the OS market is secure. As we discussed in Section III.A.4, monopolists of durable goods recognize that past sales constitute future competition (here, older versions of Windows compete with

¹⁷ Microsoft has already established general strategies for obtaining control over e-commerce standards. These connections are the Microsoft Passport, .Net, and .Net My Services initiatives.

current and future versions of Windows). The monopolists face a competitive constraint against increasing prices even in the absence of any significant rivals. Such monopolies naturally seek ways to circumvent the constraint. In the case of Windows, the constraint is potentially circumvented by the collection of the vig on transactions.

44. What is the link between dominance in operating systems, streaming media, digital rights management, e-commerce, and convergence? Microsoft will attempt to use its dominance in any of these markets to increase the use of Microsoft-favored products in all of these markets. In contrast to the potential situation where different players are strong in each market, Microsoft will leverage its dominance in any market to strengthen its position in all of them. Microsoft's incentive to do this lies in the many revenue streams that it currently forgoes. For example, Microsoft does not currently charge web sites for the use of Windows media formats. If Microsoft establishes dominance in the media player market, as it translates to dominance in e-commerce hosting, Microsoft will no longer have any constraint on fully exploiting this revenue stream. Once again, this links back to the original dominance in Microsoft's OS. All of these applications are mutually reinforcing and serve to preserve the monopoly power that accrues from packaging Microsoft's OS with complementary applications.

C. The theorized benefits of product integration that may exist in some cases do not apply to the markets at issue in this case.

45. As a theoretical matter, of course, in many transactions, purchasers would prefer to buy bundles of products and services. Purchasers of glass prefer to have borates included, drivers prefer to have steering wheels with their cars, and purchasers of shoes typically prefer to have laces included. The relevant question here is whether computer applications are similar to those examples – *i.e.*, whether browsers and other middleware such as streaming media players are “mere inputs” into the overall “Windows experience.”

(1) *The economics of software markets cast doubt on Microsoft's efficiency arguments for integration of its own browser and media player with the OS.*

46. As discussed above, many forms of tying have no efficiency justification. Contractual provisions limiting the acceptance of rival technologies, or efforts to redesign code to harm rivals' performance, create economic loss. As further discussed above, Microsoft has these forms of tying at its disposal, incentives to use them, and a historical record of using them.
47. Microsoft's claims regarding the efficiencies of its contractual tying – *i.e.*, that it reduces consumer time costs and confusion to have a set of default options provided with a personal computer “out of the box” – confuse the benefit to consumers of having a browser and its media player bundled along with the OS, with the benefit of having Microsoft's choice of applications bundled with the OS. The efficiencies that come with providing an integrated package of an OS and various applications are not specific to Microsoft's applications. In a market where OEMs were free to offer whichever packages of software consumers desired (*e.g.*, Microsoft Windows with RealPlayer and IE, or Microsoft Windows with WMP and Netscape), the market would provide those varieties of packages preferred by consumers. The market would respond fully to the efficiencies associated with the purchase of a full package of hardware, OS, and software applications, and in addition, the market would be free to offer the variety that consumers demanded.
48. Our analysis supports the hypothesis that Microsoft's tying of IE and WMP and its efforts to gain DRM dominance are not driven by efficiency concerns. Although selection of some defaults is necessary on each PC, there appear to be no engineering efficiencies to the integration of the choice of default into the OS. To the contrary, choice and market competition (and consequently, efficiency) suffer when knowledgeable OEMs (who act as informed agents of consumers) face artificial barriers to playing that role, such as when Microsoft commingles code or makes Microsoft applications difficult to permanently remove as default settings. By designing system software to hamper the installation or operation of rival software suppliers, Microsoft reinforces the applications

barrier to entry; the impact is a strategic reduction in competition and a reinforcement of Microsoft's OS monopoly.

49. Additionally, the usual arguments made to justify integration in other markets are largely inapplicable to software application markets. It is often argued that integration occurs (i) to reduce transaction, distribution or production costs, or (ii) to increase the value of the final product.
50. The argument that transaction and assembly costs justify integration does not apply to major software applications. For example, consumers want to purchase some integrated packages of complementary products such as functioning automobiles because separate purchases of steering wheels, engines, dashboards, seats, *etc.* would impose enormous transaction and assembly costs. By contrast, software markets allow assembly at low cost even without integration, provided that monopolists are legally prohibited from impairing interoperability. With OEMs acting as purchasing and assembly agents for end-users, it is no more efficient for Microsoft to create OS-and-application bundles than for multiple OEMs (or third-parties who can then license such bundles to OEMs) to create those OS-and-application bundles desired by end-users.
51. Forced integration of particular software brands does not increase value. Instead, it causes an efficiency cost to the extent that end-users value the product variety entailed in the variety of inputs. The value of variety is lost with integration. Steering wheels in cars are typically undifferentiated commodities that comprise a trivial portion of the value of the final product. Thus, even though a consumer could replace the steering wheel with limited effort, there is little reason to do so because a different steering wheel is unlikely to improve the performance of the overall product. By contrast, technological development in software applications markets means that different applications can differ substantially in what they deliver to consumers. Loss of product variety as a result of integration can be costly.

(2) Contrary to Microsoft's claims, issues of pricing and innovation provide further evidence that Microsoft's tying harms the marketplace and consumers.

52. Microsoft has argued that the extension of monopoly power across a set of complementary products may produce consumer benefits if the monopolist charges lower prices than would be charged if independent monopolists were to separately produce two or more complementary products. In the latter case, each independent monopolist would raise prices higher than the level that would maximize the combined profits of all the monopolists. Thus, according to this theory, consumers benefit from Microsoft's monopoly leveraging through lower prices.
53. This theory imagines a static world in which innovation and entry are non-existent, and firms simply set prices to maximize profits, given unchanging demand and unchanging technology. The practical implications of the theory for the real world of rapidly changing technology and potential dynamic competition (as opposed to monopoly positions that are airtight) are minimal. In an economic theory that incorporates industry dynamics, strategies taken by a dominant firm to eliminate a firm in a complementary market remove a potential rival or entrant in the primary market. In the reality of software markets, this anti-competitive effect clearly overwhelms any theoretical, static price effect: innovation and dynamic competition thus are, and should be, the focus of the Microsoft case. The driver of consumer benefit in these markets is innovation: over the past ten years, while prices of applications have fluctuated only moderately, the performance of applications has grown dramatically. New applications, such as browsers and media players, have become important sources of consumer benefit, while improvements in existing applications such as financial software have yielded strong consumer benefits. In any analysis on the impact of tying, the most important question is the impact on innovation, not price. Tying harms innovation by preserving Microsoft's monopoly position, protecting it against dynamic competition to the detriment of consumers.
54. Microsoft argues that a single monopolist over two products has greater incentives to innovate than two separate monopolists. If two complementary products are

monopolized separately, the argument goes, each monopolist ignores the positive benefits that accrue to the other firm from an increase in its own pace of innovation. In the matter at hand, this theoretical efficiency would argue that if Microsoft had a monopoly in operating systems, while Novell had a monopoly in browsers, Novell would not innovate as much as possible because it would not take into consideration the positive effects of browser innovation on operating system demand. This reasoning also suggests that innovation in the industry would be enhanced if Microsoft's OS dominance were to be extended further into still more applications markets. The key point missed in this theory is that any extension of Microsoft's OS monopoly power would dampen innovation into substitutes for Microsoft's OS. Enhancing the applications barriers only reduces the incentive for any firm to engage in OS or applications innovation. If an application could be open to competition – *i.e.*, if it could be characterized by some rivalry or competition, as an alternative to Microsoft's integration – then unrestrained competition would strengthen rather than weaken innovation. While Microsoft's dominance in the browser market today may be a *fait accompli*, untying the OS and media player will lead to such greater competition in media player innovation.

55. Significantly for this case, untying would also increase competition in the operating system market. As discussed earlier in Section III.A, tying protects Microsoft's operating system dominance by maintaining the applications barrier to entry and weakening or deterring direct platform challenges. If there are separate monopolists in adjacent markets, each will have the incentive to enter or sponsor entry into the other's market, leading to competitive pressure in both markets.¹⁸

¹⁸ Of course, that monopolist competition will only occur if the first monopolist is not permitted to use anti-competitive tactics to foreclose the market for unintegrated rivals.

IV. GIVEN THE INCENTIVES, HISTORY, AND EVIDENCE IN THIS CASE, THE CONCLUSION IS THAT MICROSOFT HAS ENGAGED, AND IS ENGAGING, IN ANTI-COMPETITIVE TYING IN ORDER TO PROTECT AND STRENGTHEN ITS OPERATING SYSTEM MONOPOLY.

A. Microsoft's options, incentives, and history create a strong presumption that Microsoft's tying harms OS competition and consumers.

56. The District Court's Findings of Fact confirm that it is Microsoft's "corporate practice to pressure other firms to halt software development that either shows the potential to weaken Microsoft's applications barrier to entry or competes directly with Microsoft's most cherished software products."¹⁹ As a historical matter, Microsoft has clearly engaged in anti-competitive, inefficient tying with other applications.²⁰ For example, Microsoft has forbidden OEMs from changing system defaults so as to make non-Microsoft products the "default application" in "out of the box" packages.²¹ While Microsoft allows the "installation icons" of competing applications to be installed on desktops "out of the box," installation icons disappear if they are not invoked. In an even more subtle form of contractual tying, Microsoft requires applications that run with Windows to obtain a certification from Microsoft. This permits Microsoft to monitor and perhaps discipline its applications rivals.²² While some of these practices differ in form from strict tying (a certification requirement for software is not the same as a contractual requirement that OEMs use Microsoft products), the effect is similar in that Microsoft is signaling to all other market participants that applications may only run with Windows by Microsoft's permission.

¹⁹ See U.S. Findings of Fact ¶ 93.

²⁰ Microsoft has a track record of placing code for Microsoft applications in the same files as code providing functions for its OS in order to achieve its anti-competitive ends. This includes the illegal commingling of code for Microsoft's Internet Explorer with the operating code and the tying of IE with the OS. See U.S. Findings of Fact ¶¶ 161-229.

²¹ See U.S. Findings of Fact ¶ 357, relating to Microsoft's attempts through tying and other means to induce users to select Microsoft's Internet Explorer as the preferred, perhaps only, path to the web. It is possible for consumers to incur the cost to change defaults, but the incentives to do this are very small.

²² See Steven Vaughan Nichols, *Resisting the Windows XP Message*, ZDNet, May 9, 2001 ("I can't help but wonder if ... independent software vendors will have trouble getting that all-important signature for [their] programs [W]hy do I feel certain that giving Microsoft absolute power over all XP apps probably doesn't spell good news for anyone in the tech business - except Microsoft?").

57. Microsoft's profit incentives dictate that Microsoft would tie its products together much more aggressively than efficiency alone would suggest. With regard to the question of the nature of competition in the media player market, one of the current objects of Microsoft's tying, and, in particular its tying of WMP, is clear: as the District Court determined, the "multimedia stream [represents] strategic grounds that Microsoft [needs] to capture."²³ That – and not efficiency – is the driving force behind Microsoft's conduct.

B. The evidence indicates that Microsoft is anti-competitively tying the browser and the media player with its operating system.

58. In the absence of tying, Microsoft would provide an operating system and applications such as the browser and media player that were developed and offered in a modular, plug-replaceable fashion. The applications codes for the browser and the media player would not be commingled with the OS code, but would instead communicate with the OS through a set of well defined APIs. Publishing the APIs and interface protocols in this non-tying world would enhance the value of Microsoft's operating system by encouraging competition in the innovation of the complementary good – the browser and the media player. Greater competition and functional value in the market for a complementary good always benefit a firm by increasing the demand for its product. In the absence of anti-competitive incentives to reinforce barriers to entry, this strategy would maximize the profits that Microsoft obtains from its operating system. The fact that Microsoft does not engage in such a business strategy demonstrates, in the absence of evidence that tying is efficient, that Microsoft is motivated by anti-competitive incentives.

59. Microsoft openly engages in contractual tying and basic technological integration. By developing and marketing Windows XP as an integrated package of operating system and popular applications, Microsoft directly ignored the findings of fact and law by U.S. courts.²⁴ Microsoft's history makes it likely that Microsoft is also engaging in various

²³ See U.S. Findings of Fact ¶ 112.

²⁴ "In June ... seven appeals judges ruled unanimously that Microsoft was a monopoly that had violated the antitrust laws by integrating its Web browser into its Windows operating system in an effort to freeze out other browsers. [The Court of Appeals ruled that] Microsoft shouldn't be allowed to design Windows in a way that limits

forms of OEM coercion to raise rivals' distribution costs and encourage the distribution of its own middleware products. Consistent with our analysis, this tying generally serves the purpose of Microsoft profitability and reinforcement of its OS dominance, rather than consumer benefit. Microsoft directly engages in anti-competitive tying when it prevents OEMs and end-users from removing or uninstalling IE and WMP. Microsoft does this through code commingling between the media player and the operating system that renders substitution for WMP difficult, or even impossible.

60. Another example of anti-competitive tying is that Microsoft renders its own DRM technology software non-interoperable with other media players because of DRM's interaction with Window XP's own "secure audio path" software. While this is not tying in the sense of designing the operating system to be incompatible with rival applications, it does involve designing an application – DRM – that limits the compatibility of rival applications in a closely related market, the market for media players.
61. More generally, Microsoft anti-competitively undermines the functionality and utility of rival streaming media players and formats. For example, Microsoft denies a license for playing files streamed in Windows content encoding formats to its principal competitor, RealNetworks, thereby reducing the utility to consumers of RealNetworks' products. Microsoft also disadvantages rival content-encoding formats by designing WMP to record only in Windows media formats. These actions have, in the past, served to reduce consumers' perceptions of rivals' performance – for example by deliberately making consumers' use of Netscape "a jolting experience"²⁵ or damaging MP3 quality and functionality.²⁶

consumer choice – the ability of users to discover and easily use other companies' products and services. [Despite this,] the company went on to launch a new version of Windows – Windows XP – that continued to integrate tightly into the operating system new features that are crucial to extending Microsoft's monopoly onto the next battleground: Internet-based services. And it added these features in a way that hinders consumer choice." Walter S. Mossberg, *For Microsoft, 2001 Was a Good Year, But At Consumers' Expense*, The Wall Street Journal, December 27, 2001.

²⁵ See U.S. Findings of Fact ¶ 160.

²⁶ See Ted Bridis, *Technology Industry Aims to Render MP3 Obsolete*, The Wall Street Journal, Apr. 12, 2001, at A3. ("Under Microsoft's new restrictions ... MP3 music 'sounds like somebody in a phone booth underwater,' says P.J. McNealy, an analyst who researches Internet audio issues for Gartner Inc.... early testers of beta versions of Windows XP already complain that the most popular MP3 recording applications – which compete

62. In general, OEMs perform a screening function, as agents of consumers, by ensuring that the software products provided out of the box are compatible with each other and with the operating system.²⁷ Consumers are aware that OEMs perform this function. Consumers are also aware that OEMs' reputations are based partly on packaging high-quality software products, so that OEMs have the incentive to choose the best software products for the price. Consumers are in general not aware of the contractual restrictions imposed in various contractual arrangements that might explain the choice of media player, including, for example, any threat not to license the Windows OS to the OEM unless all Windows applications are included as defaults. Nor are consumers aware of any financial incentives offered to OEMs by Microsoft to include only Microsoft applications as default options. Contractual tying alone will thus cause consumers to infer, for reasons unrelated to merit, that Microsoft's applications are the optimal products for them.
63. As suggested above, the interaction of all these effects, combined with rational expectations, can easily lead to the rapid foreclosure of competition. The force of self-realizing expectations is especially strong when one firm or one format is a natural focal point for consumer expectations. In markets where any number of formats could be sustained as dominant because of self-realizing expectations (economists term this "the multiplicity of rational expectations equilibria"), a focal point property of any one equilibrium can be important in predicting which equilibrium will be sustained. There could hardly be a stronger focal point than the Microsoft/Windows format for predicting the likely dominant (and perhaps sole) format. The history of the PC software industry is one of the dominance of Microsoft standards.²⁸ The prediction that the Microsoft standard will predominate in the media player market is natural, perhaps inescapable, for a consumer – uninformed about the media player market specifically – debating about which format to adopt. While it is arguable that strong network effects might yield

with Microsoft's format – don't seem to function properly, apparently because of changes Microsoft made to how data are written on CD-ROMs under Windows XP. Microsoft says that while other software vendors' products may not be 'optimized' to run with Windows XP, those products should run acceptably with the operating system.”).

²⁷ This is similar to the screening function that upscale department stores provide in selecting high-quality products. Intermediaries in retail markets invest in establishing brand names or trust on the part of consumers.

²⁸ See U.S. Findings of Fact ¶¶ 33 - 35, 53, 60, and 62-64.

dominance by a single firm in a good or service and its complements, it is uncertain whether a monopoly outcome is inevitable absent tying. In this context, tying assures OS dominance and is therefore anti-competitive.

64. Thus, Microsoft's coercion of OEMs to select WMP for the "out-of-the-box" experience, and to obscure the differences in capabilities between WMP and rival products, could weaken consumer awareness of the various functionalities available in the open market. This would increase expectations of a single dominant format, which in turn would accelerate that dominance. The dominance in the media player market, to emphasize the applications-OS interaction once more, reinforces Microsoft's dominance in operating systems.

V. CONCLUSION

65. We show in this report that Microsoft has substantial incentives to engage in anti-competitive tying of its middleware products with Windows. It has incentives to use contractual inducements to OEMs to bundle Windows with its own middleware instead of rival products; commingle applications code into the kernel of the operating system; and hamper the interoperability of rival applications. We also show that Microsoft's tying – in all of its forms – reinforces Microsoft's monopoly in operating systems.
66. Microsoft's incentives to anti-competitively bundle fall into four mutually reinforcing categories. First, by tying its middleware applications to the Windows operating system, Microsoft can strengthen the applications barrier to entry against its OS competitors. This reinforces Microsoft's OS monopoly. In order for entrants in the operating system market to succeed, they must have a wide variety of applications available for consumers to purchase. But software developers will invest in the creation of new applications only for operating systems that have widespread distribution. If Microsoft attains dominance with both the operating system and key middleware applications, it can ensure that its OS rivals will be unable to meet consumer demands for the most popular applications. With a dominant position in applications markets, Microsoft may choose not to write those applications to interoperate with rival operating systems, thus enhancing the already significant applications barrier to entry.

67. Second, tying reinforces Microsoft's OS monopoly by deterring direct challenges to the OS position as the platform of choice for software developers. Since programmers can write calls to middleware products, Microsoft's dominance in these products reduces the possibility that a universal translator (middleware) between operating systems and applications would threaten the Windows monopoly. Just as with the browser, Microsoft weakens this competitive threat to operating systems by integrating the potential substitutes directly into the OS.
68. Third, tying can provide a method of dynamic leveraging to ensure a future monopoly. This involves a direct counterargument to the familiar "one-monopoly theory," which states that a monopolist cannot collect more profits through a monopoly on a pair of complementary products (an operating system and an application) than through a monopoly on either product alone. Where the future entry into each product is uncertain, establishing a monopoly on both products in the pair increases the chance that the monopolist will retain a monopoly on at least one product in the future and therefore is positioned to collect full monopoly profits. In our context, the fact that the Windows monopoly over operating systems is not airtight creates an incentive for Microsoft to leverage its dominance so as to increase the likelihood of future dominance in at least one class of products – the operating system or applications. Dominance in applications provides (partial) insurance against the loss of monopoly power in operating systems, but the key is the preservation of monopoly in at least one of the pair of products: the OS and one or more important middleware applications.
69. Finally, tying IE and WMP into the OS and locking in Microsoft's streaming media and DRM formats put Microsoft in a position to potentially collect a tax on e-commerce transactions. Tying thus facilitates the move by Microsoft to a business strategy of collecting revenues from per-transaction royalty of its software, rather than outright sale of its software. This business strategy lessens the competition that Microsoft, as a durable-good monopolist, faces from the sales of its own previous versions of Windows. In this sense, the strategy, and its facilitation through tying, reinforce Microsoft's dominance in operating systems.

70. Product integration can theoretically be beneficial in some markets. Purchasers prefer to purchase some bundles of inputs, such as steering wheels with cars or laces with shoes. These efficiencies do not apply to the bundling of middleware with Windows. Purchasing a personal computer with a full set of applications and default options “out of the box” is valuable for many consumers. But the efficiencies that come with an integrated package of an OS and various applications are not specific to Microsoft’s applications. In a market where OEMs were free to offer whichever packages of software consumers desired, without integration of applications into the operating system, and without Microsoft’s tying constraints or inducements, the market would provide the variety of packages preferred by consumers. Moreover, the engineering efficiencies claimed for the integration of middleware code into the operating system appear to be negligible, and are therefore more than offset by the anti-competitive effects of tying. In fact, a software design organized around modular programming of the operating system and middleware applications would achieve the efficiencies associated with modular programming and would allow for plug-and-play replacement of the software.
71. In the absence of tying, Microsoft would offer an operating system and middleware applications that were distinct in the sense of modular programming. For example, neither browser nor media player code would be commingled with OS code: instead, both would communicate with the OS only through a set of published APIs. Microsoft would enhance the value of its operating system by encouraging competition in the innovation of the complementary good – *i.e.*, the browser and the media player. This strategy would maximize value to consumers and the profits that Microsoft obtains from its operating system. The fact that Microsoft does not engage in such a business strategy demonstrates, in the absence of evidence that its tying is efficient, that Microsoft is motivated by anti-competitive incentives that maintain its OS monopoly.

VI. APPENDIX: CURRICULUM VITAE OF FRANK MATHEWSON

G. FRANKLIN MATHEWSON—*Professor of Economics, Director of the Institute for Policy Analysis, University of Toronto*

Ph.D. Stanford University

B.Com. University of Toronto

ACADEMIC POSITIONS

- 1996–present *Director, Institute for Policy Analysis, University of Toronto.*
- 1969–present *Professor of Economics, Department of Economics, University of Toronto.*
- 1969–present *Research Associate, Institute for Policy Analysis, University of Toronto.*
- 1995–1996 *Acting Chair, Department of Economics, University of Toronto.*
- 1985 *Visiting Professor, Center for the Study of the Economy and the State, University of Chicago, Spring Quarter.*
- 1984 *Visiting Scholar, Graduate School of Business, University of Chicago, Spring Quarter.*
- 1978–1983 *Associate Chairman and Director of Graduate Studies, Department of Economics, University of Toronto.*
- 1970–1982 *Professor of Economics, Faculty of Management Studies, University of Toronto.*
- 1978–1979 *Senior Research Associate, Ontario Economic Council.*
- 1976–1977 *Visiting Research Fellow, Department of Political Economy, University College, University of London.*

HONORS AND FELLOWSHIPS

- Social Science and Humanities Research Council Research Fellowship: 1994, 1991, 1989, 1987, 1986, 1985
- Social Science and Humanities Research Council Leave Fellowship: 1983–1984
- Canadian Council Leave Fellowship: 1976–1977
- Canada Council Doctoral Fellowship: 1966–1969

- Woodrow Wilson Fellowship: 1965

PROFESSIONAL AFFILIATIONS

- Editorial Board, *Journal of Economics of Business*, 1992–present.
- Editorial Board, *Managerial and Decision Economics*, 1994–present.
- Editorial Board, *Economic Inquiry*, 1987–1997.
- Editorial Board, *Journal of Industrial Economics*, 1990–1995.
- Associate Editor, *International Journal of Industrial Organization*, 1982–1988.
- Co-editor with M. Trebilcock and M. Walker. *The Law and Economics of Competition Policy*, Vancouver: The Fraser Institute, 1990.
- Co-editor with J. Stiglitz. *New Developments in the Analysis of Market Structures*, Cambridge: MIT Press, 1985.
- Program Committee, European Association for Research in Industrial Economics, 1983–1991.
- Program Committee, Conference on Industrial Organization, International Economics Association, 1982.

PUBLICATIONS

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VII. APPENDIX: CURRICULUM VITAE OF RALPH WINTER

RALPH A. WINTER — *Professor of Economics and Finance, University of Toronto*

Ph.D. Economics, University of California at Berkeley

M.A. Statistics, University of California at Berkeley

B.Sc. Mathematics and Economics (with honors), University of British Columbia

ACADEMIC POSITIONS

1988–present Professor of Economics and Finance, University of Toronto

1985–1988 Associate Professor, Department of Economics and Faculty of Management Studies, University of Toronto

1979–1985 Assistant Professor, Department of Economics and Faculty of Management Studies, University of Toronto

HONORS AND FELLOWSHIPS

- Olin Senior Research Fellowship, Yale Law School, 1988
- National Fellowship, Hoover Institution, Stanford University, 1986–1987
- Harry Johnson Prize (with M. Peters), for best article in the *Canadian Journal of Economics*, 1983
- Canada Council Doctoral Fellowship, 1975–1979
- John H. Wheeler Scholarship, University of California at Berkeley, 1974–1975
- Dean's Honors List, University of British Columbia, 1974

RESEARCH GRANTS

- Social Sciences and Humanities Research Council Research Grant: 1983–1985, 1986–1987, 1988–1989, 1990, 1991–1993
- Social Sciences and Humanities Research Council Post-Doctoral Research Fellowship: 1981–1982 and 1982–1983

PROFESSIONAL AFFILIATIONS

- International Editorial Board, *Assurances*
- Editorial Board, *Journal of Industrial Economics*

PROFESSIONAL APPEARANCES

- British Columbia Utilities Commission, regarding capital structure and equity risk premium for Pacific Northern Gas, 1998
- Canadian Radio-Television and Telecommunications Commission, regarding price cap regulation for telephone companies, 1996
- Alberta Energy and Utilities Board, regarding fair rate of return for TransAlta Utilities Corporation and Alberta Power Limited, 1996
- Expert witness, *Nielsen* case, before the Canadian Competition Tribunal, 1994
- Ontario Energy Board (EBRO 483, 484), regarding fair rate of return for Centra Gas, 1993 (written submission)
- Ontario Energy Board (EBRO 4790), regarding fair rate of return for Consumers Gas, 1992
- Expert witness, *Chrysler* case, before the Canadian Competition Tribunal, 1988

PUBLICATIONS

“Efficiency as a Goal of Competition Policy,” in Canadian Competition Policy: Preparing for the Future, forthcoming, 2002.

“Efficiency Analysis in *Superior Propane*: Correct Criterion Incorrectly Applied,” forthcoming, Canadian Competition Record, 2001, with G.F. Mathewson.

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ATTACHMENT B

A DETAILED CRITIQUE OF THE
PROPOSED FINAL JUDGMENT IN
U.S. v. MICROSOFT

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INTRODUCTION

This Court may approve the parties' Proposed Final Judgment ("PFJ"), but only if it first determines that the proposed decree is "in the public interest." In reviewing the PFJ, we acknowledge that there are some beneficial and important restrictions put on Microsoft's unlawful conduct. In too many instances, however, these restraints are inevitably swallowed up by broad exceptions and grants of power to Microsoft. The result is that the proposed settlement will do little, if anything, to eliminate Microsoft's illegal practices, prevent recurrence of those acts, and promote competition in the marketplace. The public interest requires more, and the Court should thus reject the proposed settlement.

The purpose of this document is to expose – on a point-by-point, provision-by-provision basis – the many loopholes, "trap doors," and other critical deficiencies in the PFJ. We present the issues in an order that tracks the proposed decree itself so that they may be easily followed. We also provide "real world" examples where helpful.

In general, the PFJ suffers from several global, overarching flaws. First, in critical places, the language used in the PFJ to define the protections for competition are not broad enough to cover behavior the Court of Appeals held to be unlawful. Rather, only specific rights are granted, only specific competitive products are protected, and only specific anticompetitive practices are banned. In many cases, the rights and limitations are further clawed-back through carefully crafted carve-outs that benefit Microsoft.

Second, the proposed decree relies too heavily on the personal computer ("PC") manufacturers (original equipment manufacturers or "OEMs") to implement design changes – particularly in the critical area of middleware – without sufficiently ensuring their independence from Microsoft's tight clasp. The PFJ also follows timelines that are too loose and too generous to a company with the engineering resources and product-update capabilities of Microsoft.

Third, in too many places, the constraints on Microsoft (once the exceptions are taken into account) devolve into a mandate that Microsoft act "reasonably." Aside from the obvious concern about Microsoft's willingness to do so given its track record, this formulation is problematic for other reasons. It does little more than restate existing antitrust law (such provisions cannot be said to be "remedial" if they, in essence, are merely directives to refrain from future illegal acts). And, in terms of enforcement, alleged violations of such "be reasonable" provisions can only be arrested through proceedings that will become, in essence, mini-retrials of *U.S. v. Microsoft* itself.

In sum, a consent decree that causes little or no change in the defendant's behavior cannot be found to advance the public interest, especially when the defendant's conduct has been found by both the district and appellate courts to be in violation of the

law. As such, based on the numerous shortcomings outlined below, the Court should disapprove the PFJ.

SECTION-BY-SECTION CRITIQUE OF THE PFJ

Section III of the PFJ: Prohibited Conduct

A. Retaliation

- *The Scope Of The Protection Is Narrow:* Section III.A of the PFJ appears to be directed at preventing Microsoft from retaliating against OEMs that attempt to compete with Microsoft products, but Microsoft is constrained only from specified forms of retaliation. If it retaliates against an OEM for any non-specified reason, that retaliation is not prohibited. This formulation is particularly problematic because the protected OEM activities are narrowly and specifically defined. Retaliation against an OEM for installing a non-Microsoft application that does not meet the middleware definition is not prohibited; nor is retaliation against an OEM for removing a Microsoft application that does not meet the middleware definition.

For example:

- MSN and MSN Messenger do not appear to be middleware under the PFJ's highly specific definition of a "Microsoft Middleware Product." Given this uncertainty, an OEM cannot know with confidence that it is protected from retaliation if it removes the icon and start menu promotion for MSN and/or MSN Messenger.
- If client software to support Sun's Liberty Alliance (a competitor to Microsoft's Passport) were developed, it would probably not be middleware under the PFJ definition. Thus, Microsoft can retaliate if an OEM adds that software.

More generally, it is odd to have a formulation that *de facto* approves of Microsoft's retaliation against OEMs, except where that retaliation is forbidden. That is, given that competitors to Passport, .Net My Services (formerly known as Hailstorm), Windows Movie Maker, Microsoft Money, gaming programs, and Microsoft Digital Photography programs – even when shipped through the OEM channel – may not be included in the scope of protected competition, Microsoft would be free to retaliate against OEMs that promote those competitors.

Finally, the provision is substantially weakened in that only certain types of retaliation (*i.e.*, retaliation by changing contractual relations and retaliation by changing promotional arrangements) are forbidden, as opposed to prohibiting any

form of retaliation whatsoever. In order to eliminate Microsoft's ability to unlawfully protect its OS monopoly, it is essential that Microsoft be prohibited from taking any action that directly or indirectly adversely affects OEMs or other licensees who in any way support or promote non-Microsoft products or services.

- *Non-Monetary Compensation Provision:* Microsoft is free to retaliate against OEMs that promote competition by withholding any existing form of “non-monetary Compensation” – only “newly introduced forms of non-monetary Consideration” may not be withheld.
- *OEM Termination Clause Will Intimidate OEMs:* Microsoft can terminate, without notice, an OEM's Windows license, after sending the OEM two notices that it believes the licensee is violating its license. There need not be any adjudication or determination by any independent tribunal that Microsoft's two predicate claims are correct; after just two notices to any OEM of a putative violation, Microsoft may terminate without even giving notice. This provision means that the OEMs are, at any time, just two registered letters away from an unannounced economic calamity. Obviously, that danger will severely limit the willingness of the OEMs to promote products that compete with Microsoft.
- *Pricing Schemes Will Allow Microsoft to Avoid Effects of the Decree:* Microsoft can price Windows at a high price, and then put economic pressure on the OEMs to use only Microsoft applications through the provision that Microsoft can provide unlimited consideration to OEMs for distributing or promoting Microsoft's services or products. The limitation that these payments must be “commensurate with the absolute level or amount of” OEM expenditures is hollow – given that it is not clear how an OEM's costs will be accounted for, for this purpose.

B. Pricing

- *Microsoft Can Use Rebates To Eviscerate Competition.* Under Section III.B of the PFJ, Microsoft can provide unlimited “market development allowances, programs, or other discounts in connection with Windows Operating System Products.” This provision severely weakens the protection for OEM choice, functioning the same way as the rebate provision discussed above, but without any tether or limiting principle whatsoever. Arguably, Microsoft can charge \$150 per copy of Windows, but then provide a \$99 “market development allowance” for OEMs that install WMP.

Presumably, this is intended to be circumscribed by Section III.B.3.c, which provides that “discounts or their award” shall not be “based on or impose any criterion or requirement that is otherwise inconsistent with . . . this Final Judgment,” but this circular and self-referential provision does not ensure that the

practice identified above is prohibited. While Microsoft should be allowed to engage in legitimate pricing decisions, those decisions should be limited to volume-based discounts offered on a non-discriminatory basis.

C. OEM Licenses

- *Microsoft Retains Control Of Desktop Innovation:* Under Section III.C of the PFJ, Microsoft would retain control of desktop innovation by being able to prohibit OEMs from installing or displaying icons or other shortcuts to non-Microsoft software/products/services, if Microsoft does not provide the same software/product/service. For example, if Microsoft does not include a media player shortcut inside its “My Music” folder, it can forbid the OEMs from doing the same. This turns the premise that OEMs be given flexibility to differentiate their products on its head.

For example:

- Sony – as a PC OEM and a major force in the music and photography industries – would be uniquely positioned to differentiate the “My Music” and “My Photos” folder. And yet, Sony’s ability to do so turns solely on the extent to which Microsoft chooses to unleash competition in these areas.
- *Microsoft Retains Control Of Desktop Promotion:* Microsoft also, very oddly, can control the extent to which non-Microsoft middleware is promoted on the desktop, by virtue of a limitation that OEMs can promote such software at the conclusion of a boot sequence or an Internet hook-up, via a user interface that is “of similar size and shape to the user interface provided by the corresponding Microsoft middleware.” Thus, Microsoft sets the parameters for competition and user interface.
- *Promotional Flexibility For IAPs Only, And Only For The OEM’s “Own” IAP:* OEMs are allowed to offer IAP promotions at the end of the boot sequence, but not promotions for other products. Also, OEMs are allowed to offer IAPs at the end of a boot sequence, but only their “own” IAP offers. Given that this phrase is ambiguous, Microsoft may attempt to read this provision as limiting an OEM’s right to offer an IAP product to those IAPs marketed under the OEM’s brand. Helpfully, the Competitive Impact Statement suggests otherwise, but whatever this phrase means, it is a needless restriction on an OEM’s flexibility.

D. API Disclosure

- *APIs Defined Too Narrowly:* Microsoft can evade the disclosure obligation provided under Section III.D of the PFJ by “hard-wiring” links to its applications,

and through other predatory coding schemes. Additionally, the disclosure is limited to “APIs and related Documentation.” This is too narrow and can be evaded. Moreover, the provision for the disclosure of “Technical Information” found in Judge Jackson’s interim conduct remedies has been eliminated. These disclosures are necessary to provide effective interoperability.

G. Anticompetitive Agreements

- *Joint Development Agreements Can Subvert Protections Of The Settlement.* The protection against anticompetitive agreements is substantially undermined by the exception in Section III.G of the PFJ that allows Microsoft to launch “joint development or joint services arrangements” with OEMs and others. Under this provision, Microsoft can “invite” OEMs, ISVs, and other industry players to enter into “joint development” agreements and then resort to an array of exclusionary practices.

For example:

- Microsoft invites OEM X to form a “joint development” project to create “Windows for X,” a “new product” to be installed on the OEM’s PCs. As long as Microsoft’s activities are cloaked under this rubric, it is exempt from the ban on requiring the OEM to ship a fixed percentage of its units loaded with Microsoft’s applications, and other protections designed to promote competition.

H. Desktop Customization

- *Add/Remove Is For Icons Only, Not The Middleware Itself:* The add/remove provisions in Section III.H in the PFJ only allow for removal of end-user access to Microsoft middleware – not removal of the middleware itself. This position is inconsistent with the language in the Court of Appeals’ opinion on commingling or the “add/remove” issue.

If Microsoft’s middleware remains on PCs (even with the end-user access masked), then applications developers will continue to write applications that run on that middleware – reinforcing the applications barrier to entry that was at the heart of this case. Allowing Microsoft to forbid the OEMs from removing its middleware, and allowing Microsoft to configure Windows to make it impossible for end-users to do the same, allows Microsoft to reinforce the applications barrier to entry, irremediably.

As we have seen with the implementation of this approach (*i.e.*, icon removal only) with regard to Internet Explorer in Windows XP, Microsoft can use the presentation of this option in the utility to make it less desirable to end-users.

Moreover, limiting the required “add/remove” provision to icons only is actually a step backward from the current state of affairs in Windows XP, where code is removable for several pieces of Microsoft middleware.

- *Why Are Non-MS Icons Subject To Add/Remove?:* The PFJ gives Microsoft an added benefit: it can demand that OEMs include icons for non-MS middleware in the add/remove utility. Why this should be required, in the absence of any finding that assuring the permanence of non-Microsoft middleware on the desktop is anticompetitive, is bizarre. This essentially treats the victims of Microsoft’s anticompetitive behavior as if they were equally guilty of wrongdoing.
- *Microsoft Can Embed Middleware And Evade Restrictions:* Under Section III.H.2, end-users and OEMs are allowed to substitute the launch of a non-Microsoft Middleware product for the launch of Microsoft middleware only where that Microsoft middleware would be launched in a separate Top-Level Window and would display a complete end-user interface or a trademark. This, in essence, allows Microsoft to determine which middleware components will or will not be subject to effective competition. By embedding its middleware components in other middleware (and thereby not displaying it in a Top Level Window with all user interface elements), or by simply not branding the middleware with a trademark, Microsoft can essentially stop rivals from launching their products in lieu of the Microsoft products.
- *Harder For Consumers To Choose Non-Microsoft Products Than Microsoft Products:* In the same provision (III.H.2), Microsoft may require an end-user to confirm his/her choice of a non-Microsoft product, but there is no similar “double consent” requirement for Microsoft Middleware. There is no reason why it should be harder for users to select non-Microsoft products than Microsoft products.
- *Microsoft Can “Sweep” The Desktop, Eliminating Rival Icons:* Additionally, the OEM flexibility provisions are substantially undermined by a provision that allows Microsoft to exploit its “desktop sweeper” to eliminate OEM-installed icons by asking an end-user if he/she wants the OEM-installed configuration wiped out after 14 days. Thus, the OEM flexibility provisions will only last on the desktop with certainty for 14 days, and after that period, persistent automated queries from Microsoft can reverse the effect of the OEM’s installations. The effect of this provision is to severely devalue the ability of OEMs to offer premier desktop space to ISVs – and to undermine the ability of OEMs to differentiate their products and provide consumers with real choices.
- *Desktop “MFN” Requirements:* Finally, nothing in the decree appears to forbid Microsoft from requiring – especially where non-middleware is concerned – so-called MFN agreements from the OEMs. These agreements tax OEM efforts to

promote Microsoft rivals by requiring that equal promotion or placement be given to Microsoft products, often without compensation.

I. Licensing Provisions

- *Licenses Put In Hands Of OEMs Only – They May Not Be Able To Use Them Without Help:* The OEM licensing provision is limited in its effectiveness because the OEMs are prevented in Section III.I.3 from “assigning, transferring, or sublicensing” their rights. This may severely limit their ability to partner with software companies to develop innovative software packages to be pre-installed on PCs. This provision is especially harmful when contrasted with the broad partnering opportunities afforded to Microsoft under Section III.G. In addition, the OEMs’ willingness to use these provisions – even if they have the financial and technical wherewithal to do so – may be limited by the weakness of the retaliation provisions discussed above.
- *Reciprocal License? “Equal Treatment” For Law Abiders And Law Breakers Is Not Equal:* Under Section III.I.5, the PFJ requires ISVs, OEMs, and other licensees to license back to Microsoft any intellectual property they develop in the course of exercising their rights under the settlement. But that simply rewards Microsoft for having created the circumstances (*i.e.*, having acted illegally) that necessitated the settlement in the first place. Microsoft should not be able to obtain the intellectual property rights of others simply because those law abiding entities have been required to work with a lawbreaker.

In addition, this provision may inadvertently work as a “poison pill” to discourage ISVs, *et al.*, from taking advantage of the licensing rights ostensibly provided to them in Section III.I. The risk that an ISV would have to license its rights to Microsoft will be a substantial deterrent for that ISV from exercising its rights under Section III.I.

J. “Security and Anti-Piracy” Exception to API Disclosure

- *The Settlement Exempts The Software And Services That Are The Future Of Computing:* One of the most seemingly innocuous provisions in the PFJ is, in fact, one of the biggest loopholes: the provision found in Section III.J.1 that allows Microsoft to withhold from API, documentation or communication protocol disclosure any information that would “compromise the security ofdigital rights management, encryption or authentication systems.” This provision raises several critical concerns:
- *Digital Rights Management Exception “Swallows” Media Player Rule:* Since the most prevalent use of media players in the years ahead will be in playing content that is protected by digital rights management (“DRM”) (*i.e.*, copyrighted content

licensed to users on a “pay-for-play” basis), allowing Microsoft to render its DRM solution non-interoperable with non-Microsoft Media Players and DRM solutions essentially means that non-Microsoft media players will be virtually useless when loaded on Windows computers.

- *Authentication Exception Allows Microsoft To Control Internet Gateways, Server-Based Services:* Most experts agree that the future of computing lies with server-based applications that consumers will access from a variety of devices. Indeed, Microsoft’s “.Net” and “.Net My Services” (formerly known as Hailstorm) are evidence that Microsoft certainly holds this belief. These services, when linked with Microsoft’s “Passport,” are Microsoft’s self-declared effort to migrate its franchise from the desktop to the Internet.

By exempting authentication APIs and protocols from the PFJ’s disclosure/licensure requirement, the settlement exempts the most important applications and services that will drive the computer industry over the next few years. If Microsoft can wall off Passport, .Net, and .Net My Services with impunity – and link these Internet/server-based applications and services to its desktop monopoly – then Microsoft will be in a commanding position to dominate the future of computing.

Additional Problems Raised By Numerous Provisions in Section III

- *No Ban On Commingling Of Code:* Nothing in the agreement prohibits Microsoft from commingling code or binding its middleware to the OS. This was a major issue in the case; the Court of Appeals specifically found Microsoft’s commingling of browser and OS code to be anticompetitive; it rejected a petition for rehearing that centered on this issue. And yet, the PFJ would permit this activity to continue.
- The danger of the absence of this provision is reinforced by what is found in the definition of the Windows Operating System Product (“Definition U”), which states that the software code that comprises the Windows Operating System Product “shall be determined by Microsoft in its sole discretion.” Thus, Microsoft can, over time, render all the protections for middleware meaningless, by binding and commingling code, and redefining the OS to include the bound/commingled applications.
- *Too Many Of The Provisions Require A Mini-Retrial To Be Enforced:* In numerous places throughout Section III, the limitations on Microsoft’s conduct are basically rephrased versions of the Rule of Reason. For example, in Section III.F.2, Microsoft may enter into restrictive agreements with ISVs as long as those agreements are “reasonably necessary;” likewise, the Joint Venture provisions found in Section III.G also employ a rule-of-reason test. As such, they simply

restate textbook antitrust law, and alleged violations of these provisions could only be resolved through mini-trials.

Server Interoperability Issues (Found in Sections III.E, III.H and III.J)

- *Only Full Interoperability Can Reduce Microsoft's Barriers To Desktop Competition:* The PFJ's proposed server remedy will fail to provide meaningful, competitive interoperability between Microsoft desktops and non-Microsoft servers because:
 - The applications barrier to entry is central to this case and to Microsoft's desktop monopoly. A remedy that provides true server interoperability can be a powerful tool to reduce the applications barrier to entry. The server has the same potential to provide an alternative platform as did the browser or Java. In that sense, it is directly analogous to middleware products.
 - Microsoft has plainly recognized the threat that non-Microsoft servers pose as an alternative applications platform and has acted to exclude those products from full interoperation with the desktop and to advantage its own server products. It is able to do so because it controls the means by which servers may interoperate with the functions and features of the Windows desktop. In order to succeed in establishing non-Microsoft servers as an effective alternative application platform, both consumers and application developers have to be convinced that such servers: (1) can overcome the interoperability barriers that Microsoft has erected, and (2) have become viable alternatives to Microsoft's own servers, insofar as they can fully interoperate with the desktop.

An incomplete interoperability remedy fails to meet this test. Neither consumers (professional IT managers) nor server application developers will be attracted to non-Microsoft servers that lack any important interoperability functionality. If important interoperability barriers are left in place, IT managers simply will not buy the product and the remedy will fail to achieve its intended purpose. This is an important guiding principle.

The proposed decree allows Microsoft to continue to exploit dependencies between its desktop applications or its desktop middleware and its servers or handheld devices to exclude server and handheld competition.

- *Section III.I Excludes Competing Server Vendors From The Benefits Of Section III.E's Disclosures:* Section III.I limits Microsoft's obligation to license its desktop-server Communications Protocols to ISVs, IHVs, IAP, ICPs, and OEMs;

thus, server competitors are excluded from the group of companies that Microsoft must license information to under section III.E.

- *The Failure To Define “Interoperate” Is A Mistake:* Neither Section III.E nor any other provision of the PFJ defines the meaning of “interoperate.” The failure to define “interoperate” is tantamount to the Department of Justice’s (“DOJ”) prior failure to define “integrate” in the 1995 consent decree, and will form the basis for unending disputes over the scope of Microsoft’s disclosure obligations.
- *“Communications Protocol” Is Defined Too Narrowly And Too Ambiguously:* The definition of “Communications Protocol,” which determines the scope of server information to be disclosed by Microsoft, is highly ambiguous and potentially very narrow in scope:
 - It appears to be limited to the Windows 2000 server, and thus may exclude Microsoft’s Advanced Windows 2000 server and Datacenter server.
 - It is unclear whether “rules for information exchange” that “govern the format, semantics, timing sequencing, and error control of messages exchanged over a network” mean the rules for transmitting information packets over a network, or the rules for formatting and interpreting information within such packets.
 - It appears to be limited to information exchanged via LANs and WANs, and therefore may exclude information exchanged over the Internet. In other words, having illegally seized dominance over browsers, Microsoft will be allowed to use that power to establish *de facto* proprietary protocols for Internet communication and keep them entirely to itself.

Even in its broadest possible meaning, the term “Communications Protocols” is insufficiently broad or comprehensive to require disclosure of the information needed to permit interoperability between non-Microsoft servers and the full features and functions of Windows desktops.

- *Section III.J’s Carve-Out Eliminates the Most Important Disclosures:* What little Section III.E provides, Section III.J takes away by permitting Microsoft to refuse to disclose the very protocols and technical dependencies it is currently using to prevent non-Microsoft servers from interoperating with Microsoft desktops and servers.

Section IV Of The PFJ: Compliance and Enforcement

A. Enforcement Authority

- *Enforcement Authority Is Too Difficult To Employ:* Clearly, what is missing from the agreement is a quick, meaningful, and empowered mechanism for preventing and rectifying Microsoft's inevitable violations of the agreement. Thus, while the provision allowing Microsoft to cure any violations of Sections III.C, D, E, and H before an enforcement action may be brought is not itself objectionable, it is but one of a number of provisions that make enforcing the agreement cumbersome, expensive and time-consuming.

B. Technical Committee / D. Voluntary Dispute Resolution

- *Source Code Access Is Not Enough:* While it is helpful that the Technical Committee ("TC") will have access to Microsoft's source code and can resolve disputes involving that issue, the TC is otherwise powerless to compel Microsoft's compliance with the agreement in any other respect. The prospects that Microsoft will accept the decisions of the TC in a voluntary dispute resolution process are near zero. And the entire mechanism seems designed to extend disputes indefinitely: no time limits or time-lines are specified for dispute resolution.

As it stands now, a party injured by Microsoft's violation of the decree can complain to the TC, which will then conduct an investigation:

- Once the investigation is complete, the TC will presumably issue some decision; while the investigation is ongoing, the TC is supposed to consult with Microsoft's Compliance Officer, for an indefinite period;
- If the TC concludes that Microsoft violated the agreement, and Microsoft does not agree to change its behavior or rectify the wrong, then the TC must decide whether to recommend the matter to the DOJ for further action;
- Once recommended, the DOJ – after some review period – may decide to take action, and apply to the court for a remedy, or it may not;
- And once the DOJ applies for action, the process in court to obtain relief or remedy may extend for an indefinite period.

This is obviously a lengthy and ineffective process for ensuring that Microsoft complies with its obligations under the decree. In an industry where time is of the

essence and delays can be fatal, the built-in delays that allow Microsoft to drag its feet are wholly unacceptable.

- *Technical Committee's Investigation Has Only Limited Use:* The work of the Technical Committee cannot “be admitted in any enforcement proceeding before the Court for any purpose,” and the members of the TC are forbidden to appear. Thus, under the terms of the decree, the substantial time, effort and expense that can go into a TC process may need to be duplicated in an enforcement action – adding to the complexity and expense that the process will pose for victims of Microsoft violations.

Section V Of The PFJ: Termination

A. Five-Year Limit

- *Five-Year Coverage Is Inadequate:* Given the scope of Microsoft’s violations, the time period required to restore effective competition, and the pattern of willful lawbreaking on Microsoft’s part, a five-year consent decree is inadequate.

B. Two-Year Extension

- *Penalty For Knowing Violations Is Too Lenient:* Amazingly, the PFJ provides that no matter how many knowing and willful violations Microsoft engages in, the restrictions found in the settlement may be extended only for a single two-year period. Thus, if Microsoft is adjudged to have engaged in such a pattern of violations, it essentially has a “free reign” to repeat those violations with impunity.

Section VI Of The PFJ: Definitions

A. APIs

- *API Definition Too Narrow:* This is discussed above.

I. ISV

- *Definition Is Not Forward-Looking:* The definition of ISV is drafted too narrowly and should more clearly encompass developers of software products designed to run on new versions of the Windows operating system and next generation computing devices.

K. Microsoft Middleware Product

➤ *Definition Exempts Too Much Middleware:* Much of the decree is based on this definition – the OEMs’ flexibility turns on what is included or excluded from this category of application. And yet the definition, which is different from the definition used by the District Court (affirmed and employed by the Court of Appeals) is fatally flawed.

- First, there are only five existing products that can be known with certainty to be “Microsoft Middleware Products.” That means that highly similar items, such as MSN, MSN Messenger, MSN Explorer, Passport, Outlook, and Office may be excluded from the definition of middleware. Why Windows Messenger would be covered by the PFJ, but MSN Messenger would be exempt; or why Internet Explorer would be covered, while MSN Explorer would be exempt – if this is, in fact, how the provision operates – is a mystery. Why ambiguity would be accepted in such a critical area is an even greater mystery.

Given the uncertainty, Microsoft may attempt to retaliate against OEMs that remove even the icons for its applications; it may also attempt to prohibit end-users from removing these applications (or even their icons). This is a step backward from the status quo (even in Windows XP); the ambiguity is a gaping hole.

- Second, the generic middleware definition, which applies only to new products, and therefore does not capture any product now in existence, allows Microsoft to define which products are included or not, by virtue of Microsoft’s trademark and branding choices. Thus, as long as Microsoft buries these products inside other applications, they are not independently considered middleware.
- Third, as suggested in the points above, the definition misses the future platform challenges to Microsoft’s Windows monopoly: web-based services. These services should be specifically defined and included in the class of protected middleware.

N. Non-Microsoft Middleware Product

➤ *Only Developers With Substantial Resources Will Be Protected:* The competitive offerings protected by the decree are narrowly limited to offerings that fall within the definition of “Non-Microsoft Middleware Products.” Again, as noted above, the guarantees of OEM flexibility, promotion, and end-user choice apply only to these specified products – not to any other software applications.

And yet, sadly, this narrow definition extends protection only to applications “of which at least one million copies were distributed in the United States within the previous year.” Thus, “an innovator in his garage,” creating a new form of middleware to revolutionize the computer industry, has no protection from Microsoft’s rapacious ways until he can achieve the distribution of 1 million copies of his software.

Also, as noted above, “web-based services” are not captured in this definition, notwithstanding their importance to future competition to the Windows OS.

R. Timely Manner

- *Netscape, All Over Again*: Microsoft’s obligation to disclose APIs and other materials needed to make applications interoperable with Windows in a “timely manner” is keyed off the definition of that term in Section R. But Microsoft retains complete control over this timeline because the definition provides that Microsoft is under no obligation to engage in these disclosures until it distributes a version of the Windows OS to 150,000 beta testers. Thus, as long as Microsoft restricts its beta testing program to 149,999 individuals until very late in the development process, it can effectively eviscerate the disclosure requirements. Our review of the available documentation shows, for example, that Microsoft had no more than 20,000 beta testers¹ for Windows XP until very late in the release cycle; thus, had this provision been in place during the Windows XP release cycle, Microsoft would have been under no obligation to release APIs until the eve of product shipping.

Slow disclosure of APIs is precisely how Microsoft defeated Netscape’s timely interoperability with Windows 95. Thus, in this way, not only is the decree inadequate to prevent future wrongdoing, it does not even redress proven illegal acts in the past.

U. Windows Operating System Product

The scope of Microsoft’s disclosure obligations under the agreement are determined in large part by the meaning of “Windows Operating System Product.” The definition of Windows Operating System Product leaves Microsoft free to determine in “its sole discretion” what software code comprises a “Windows Operating System Product.” In other words, Microsoft’s disclosure obligation is subject entirely to its discretion.

¹ Note that the number of “beta testers” will be much smaller than the number of “beta copies” of a product that is being prepared for release.

Added Definitions – Bind, Interoperate, Technical Information and Web-Based Service

- *Missing Definitions From Remedial Order:* As discussed above, the PFJ omits the definitions for “Bind,” “Interoperate” and “Technical Information,” which are critical for ensuring that this agreement provides real constraints on Microsoft’s illegal activities.
- *Exclusion Of Web-Based Services:* In addition, the exclusion of web-based services from the category of protected competitive threats to the Windows OS is a grave omission. The definition of middleware should include a proviso that stipulates that web-based services be considered as if they were middleware (whether or not they technically fit in the category).